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ARCHITECTURE

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June, 1924

ARCHITECTURE

In the interval between the February issue of ARCHITECTURE and this number, it was decided by the Council that the magazine should be taken over by another publisher. In future this paper's production will be in the hands of ART IN AUSTRALIA LTD. Each monthly issue will contain the usual proceedings of the Institute of Architects, and every three months the magazine will appear with extra letterpress and illustrative material. Under the new organisation it is hoped that considerable improvement will be made, and the support and co-operation of every member of the Institute is urgently needed. Articles of general interest to the profession will be welcomed by the Editors. Owing to the changes which have taken place, it is quite natural that considerable delay has been experienced; but, now that the majority of difficulties has been overcome, future numbers will be issued on the appointed day of publication.

LECTURE ON

MODERN REINFORCED CONCRETE DESIGN AND CONSTRUCTION

By Mr. MALCOLM S. STANLEY, M.C., A.M.I.E.Aus.

TUESDAY, 8th APRIL, 1924

THE PRESIDENT (Sir Charles Rosenthal) occupied the chair.

On the motion of Mr. Waterhouse, seconded by Colonel Hurst, the minutes of the last Ordinary General Meeting were confirmed.

The President announced that the Secretary of the R.I.B.A. in Australia had received a letter from the Secretary of the R.I.B.A. in England, dated 28th February, extending an invitation to any of our architects to visit the Annual Conference at Oxford, from July 9th to 12th. It was decided to send notice of this Conference to Colonel Spain, and Messrs. Sulman and Morrow, who were in England, or would be shortly.

The President announced that a card had been received from Colonel Spain congratulating the members who had been elected to office, and wishing the Institute every success for 1924.

Apologies were received from the Representative of the Institute of Surveyors, the Regional Plan Conference, Colonel Vernon, and Mr. Peddle.

THE PRESIDENT: Two or three days ago I was present at a deputation from the Committee of the proposed Katoomba District Hospital to the Chief Secretary. The Hospital will cost £20,000, and the local people have collected £8000, and will have another £2000 by the end of the year. The object of the deputation was to request the Chief Secretary to make available the £1 for £1 subsidy which the Government usually gives, thus making £20,000 in all. The Chief Secretary agreed to this, but I raised the point about offering competitive designs, and I asked Mr. Oakes whether or not the subsidy is

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given conditionally that the Government Architect does the plans. Mr. Oakes said he had previously allowed or agreed to local contractors carrying out work in place of the Works Department, but he said the question had never been raised before as to an outside Architect doing the work, and he said he would not like to give an answer straight away. I think I am right in assuming that this Institute does desire this work to be thrown open to competition. The case is not quite on a par with other public bodies, in so far as the public is subscribing half the amount, and they are somewhat in a different position to an ordinary business concern. It is only a fair thing that these competitions should be allowed, and encouraged. We have yet to receive a reply from Mr. Oakes, but I rather anticipate he will not disapprove of the idea, and, if this proposal is agreed to in one direction, it will help us in others.

Regarding the address we are to have to-night, I would like to say first of all, that we are grateful to Mr. Stanley for coming along to give us this lecture. I am glad to say that Mr. Stanley is one of those who applied his knowledge for the benefit of the Nation as a whole during the war, I am reminded of two or three instances on the other side of the world when he was a civil officer helping the A.I.F. to do its job. As you will notice, Mr. Stanley wears the Military Cross, and he will pardon me if I say that the Military Cross for officers and the Military Medal for the rank and file in the late war are equivalent to any Victoria Cross in any other war.

We are pleased indeed that Mr. Stanley has come along, having the qualifications he has. Mr. Stanley may be interested to know that the Institute decided some time ago that in any reinforced concrete work, its members would be responsible for the engagement and payment of specialists to help them. In days gone by (and perhaps sometimes to-day) architects were in the habit of asking outside firms who employ engineers to advise them in connection with steel work and construction work generally. They would give prices for certain work, and then pass the contract over to the other firm, without any trouble to themselves, while at the same time the commission would be chargeable to their client. We feel that this is not morally right. If an architect is responsible for the carrying out of a building in its entirety, he must do one of two things. He must either have someone in his office who is capable of doing the work, or he must go outside and pay someone else. He must not take a commission from his employer on work which has not been designed or perhaps even supervised by him, and about which he has had practically nothing to do, except to pass it on to someone else, who may do the very best for the architect. We hope our members will stand by the principle, in all outside works, of either employing someone in their own office capable of doing the work, or engaging a specialist and paying him adequately for the work involved. One or two instances have occurred, where a little friction has been caused, as between client and architect.

I have now much pleasure in asking Mr. Stanley to address you.

MR. STANLEY: Gentlemen, I appreciate very much the remarks of your President. I had the good fortune to meet him on the other side, and to know him well as a superior officer, and I think that on one occasion at least I carried out work under his direction.

To-night I would like to treat my paper, as it were, in two parts, the first part to be concentrated on that aspect of concrete work which involves only the designing, the second part to deal with works which have been carried out in other parts of Australia, and which I think will compare favorably with any work in concrete carried out in any part of the world. We are apt to hear a great deal about the work of America. To a certain extent our concrete work here follows along similar lines, but we must remember that the conditions which exist here are not the same as exist in America. There you have a country where timber is cheap. In Australia it is exceptionally dear, which is an important fact to notice, because a considerable amount of timber is used in concrete work. That fact alone, I think, should teach Australians to develop originally and along their own lines, the whole time, endeavouring to be economical so far as timber is concerned. In other parts of Australia endeavours have been made to meet the question of economy in timber, and to-night I would like to show you some of the work carried out there. It has been my good fortune to travel considerably during the past few months, and examine quite closely the concrete work, not only of your own City, but also of Adelaide and Melbourne.

The first part of my paper will deal with the charts which are used by modern engineers for computing the sizes of sections for reinforced concrete work. They are based on the work of a Pole, I think, and later on that of a French professor who, in 1899, developed a new system of chart or graph which eliminated entirely from the charts as you know them to-day that background of squares which makes them difficult to read. He gives to us a very wonderful and simple method for carrying out our calculations. For something like about 20 years those charts were practically lost sight of, and we find that, in 1921, an American professor named Lipcur brought them to light again, and determined a number of forms of normagraphs, of which he scheduled about 14 different kinds. It means that by examining the formula you can tell the characteristic normagraph which would apply. These normagraphs are very remarkable, and the ones I am about to show you are prepared expressly for this meeting. They are a bit rough, as I did them for myself.

[THE LECTURE]

MODERN DESIGN AND CONSTRUCTION IN REINFORCED CONCRETE

T it proposed to briefly introduce the use of Nomographs or Alignment Charts as applied to Reinforced Concrete Design, and later, to make permanent record of a recent test conducted on a full-sized floor panel expressly erected for test purposes, and of actual floors designed and built prior to and as a result of these tests.

Scattered throughout Engineer journals Nomographs or Alignment Charts are to be found. These line charts express with clearness and accuracy a considerable group of engineer formulæ. The actual construction is simple, and is described at length in numerous works on the subject—those by Lipka, Hazlet, Peddle and Brodetsky being best known. The Adelaide and Sydney Public Libraries have copies of Brodetsky's book, whilst the Melbourne Public Library has two or three copies by different authors. Apart from these, it is difficult to secure at the present time works on the subject. Nomography is worthy of wider interest. To Engineering in its varied fields, nomography will relieve much mental fatigue, for changes in the variables in a formula or function may be observed with great simplicity.

The Principles of Alignment Diagrams were first most fully disclosed in a work of Prof. A'OCagne —"Traite de Nomographie" published in 1899, and later Prof. Lipka has scheduled a number of forms in his "Graphical and Mechanical Computations" published by Wiley & Sons, 1921.

"To date, Co-ordinate Scales have been most employed, and Plotting is connected in most minds inseparably with two axes. These are simple when only two variables are involved; increase the number of the variables, however, and the co-ordinate diagram becomes complicated. Again, a curve or line across the usual form of graph is often more or less obscured by a background of squares. It usually represents only one condition, and frequent interpolation is necessary, often between curves, with a consequent loss of accuracy. It is easy to read a nomograph with precision because of the few lines, and any interpolation necessary is generally along a straight line. It provides a tabulation for all possible values within the limits of the nomograph, and enables solutions to be made, irrespective of what quantity in the formulæ is unknown. Also, it permits the reader to observe instantly the effect of a change, either great or small, in any one of the variables."

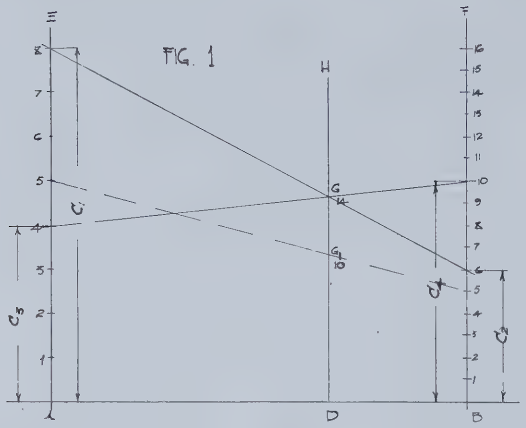
There are a number of types of nomographs, but an example of one simple type will give a basis for their general construction.

Fig. 1. Take the simplest case, $a + b = C$.

Draw two verticals A E and B F any convenient distance apart—
Let A E be the axis of "a."
Let B F „ „ „ „ "b."
Draw a horizontal line A B.
Tabulate A E and B F, using any natural scales.
Draw diagonals such that $C_1+C_2=C_3+C_4$.
Through G, the intersection of diagonals, draw the vertical line DH.

It will be found that all lines drawn through G intercepting A E and B F give a constant $C_a + C_b = C_1 + C_2 = C_3 + C_4$, etc. Similarly, for any other point G_1 the sum of the intercepts on A E and B F or any line through G_1 is a constant. For point G the sum of the intercepts $8 + 6 = 14$. For point G_1 sum of intercepts $5 + 5 = 10$. It will be seen that line D H can be tabulated in such a way that the sum of the

FIG. 1



intercepts is expressed. The modulus of the scale is controlled by the scales used for A E and B F. Also, the ratio of distance A D to distance D B is dependent on the scale ratio used to tabulate A E and B F. The proof is a simple problem in similar triangles.

Tabulation for D H, when uniform or natural scales are used, can be most easily secured by transferring the distance between the known values to a prepared scale adaptable to any modulus.

By using logarithmic scales to tabulate the values on A E and B F, the form $a + b = C$ changes to $a \times b = C$ or $\log. a + \log. b - \log. C = 0$.

"Most of the formulæ in practice contain products with powers, by taking logs., multiplications become additions and the use of logarithmic scales permits the method described above to be applied with a slight modification." A great group of engineer formulæ can be simply modified for use in nomographs; others, however, will necessitate the application of Higher Mathematics for their reduction. Slide rule scales are useful for tabulating the axes when logarithmic values are applied.

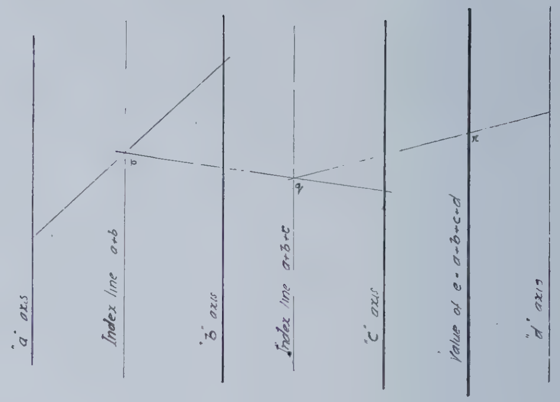
Fig. III.—Forms of $a + b + c + d = e$ may be treated by grouping in combinations of three, using index or reference lines to give the continued summation.

$a + b =$ referred to index line (at p).
$a + b + c =$ referred to index line (at q).
$a + b + c + d = e$ (at r).

The form $e = \sqrt[n]{a} \times b^m \times c^q \times d^p$ is identical with Fig 4 except that logarithmic scales are used, and

Axis a is tabulated for $\frac{1}{n}$ log. a.
,, b ,, ,, ,, m log. b.
,, c ,, ,, ,, q log. c.
,, d ,, ,, ,, p log. d.

FIG III



Index lines may or may not be graduated, but the final line "e" will require to be tabulated in correct ratio.

Fig. IV.—The construction of $a + b = c$ nomograph is usually conducted as follows:—

Decide on the limits of the nomograph—draw two lines, say 6″ apart, tabulate the "a" and "b" axis.

In the upper part of the scales, join a_4, b_3 and a_3, b_4 so that $a_4 + b_3 = a_3 + b_4 = C_2$

In the lower part of the scales, join a_2, b_1 and a_1, b_2 so that $a_2 + b_1 = a_1 + b_2 = C_1$.

Draw a line through C_2, C_1.

FIG. IV

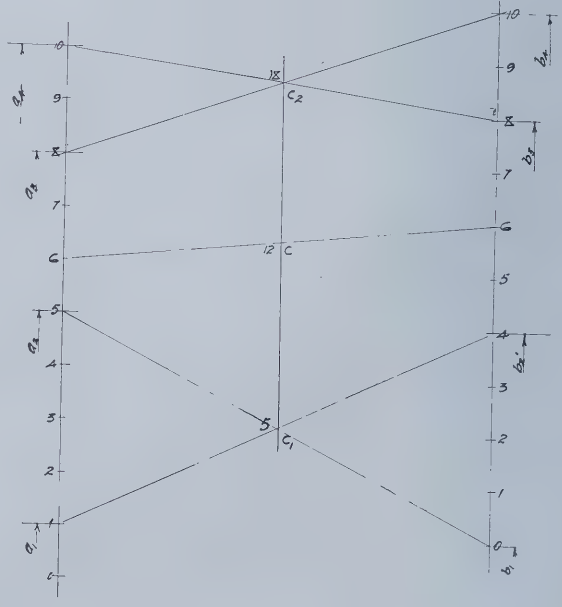
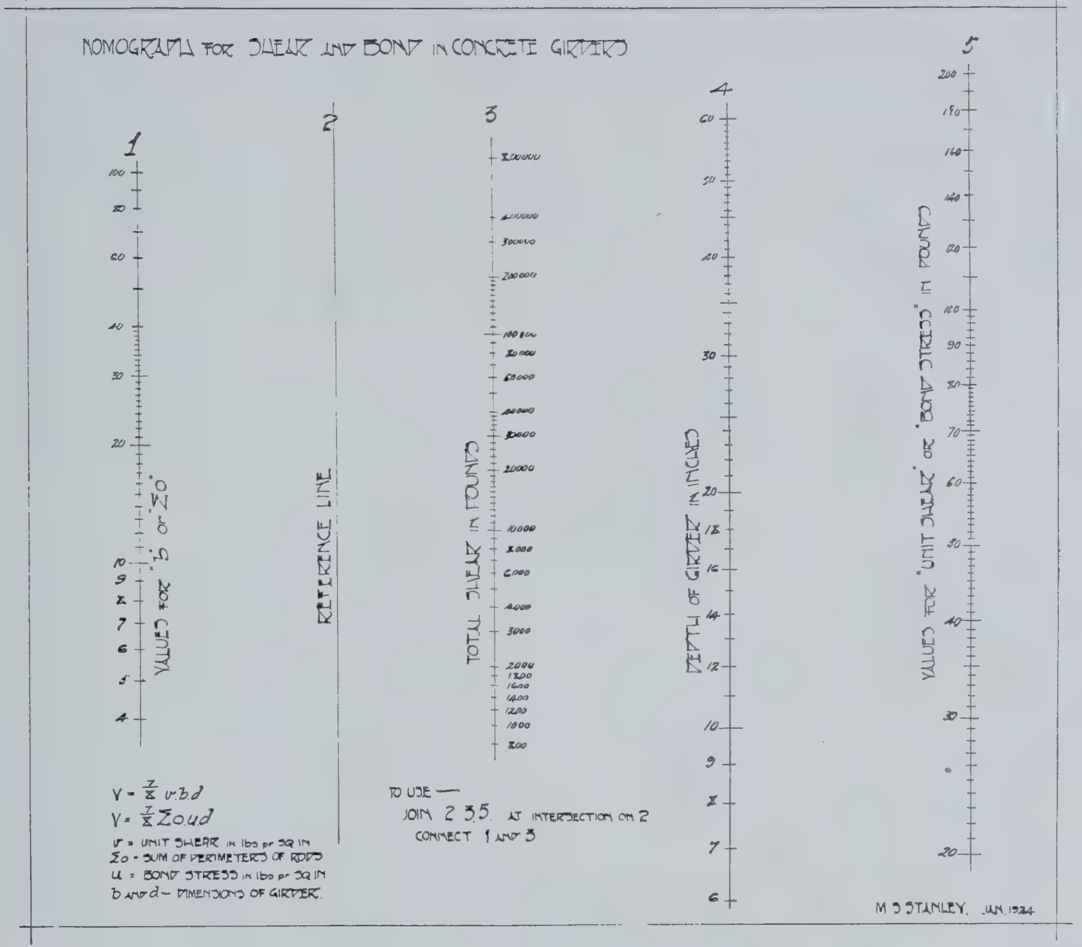


FIG VI


NOMOGRAPH FOR SHEAR AND BOND IN CONCRETE GIRDERS
1
2
3
4
5
VALUES FOR "b" OR "Σo"
REFERENCE LINE
TOTAL SHEAR IN POUNDS
DEPTH OF GIRDER IN INCHES
VALUES FOR "UNIT SHEAR" OR "BOND STRESS" IN POUNDS
V = 7/8 v.b.d
V = 7/8 Σo.u.d
v = UNIT SHEAR in lbs pr SQ IN
Σo = SUM OF PERIMETERS OF RODS
u = BOND STRESS in lbs pr SQ IN
b AND d – DIMENSIONS OF GIRDER.
TO USE —
JOIN 2 3.5. AT INTERSECTION ON 2
CONNECT 1 AND 3
M S STANLEY. JAN. 1924

Tabulate a suitable scale along C_1, C_2, then any point C when connected by a straight line intersecting the a and b axis will solve the equation $a + b = c$ when natural scales are used, and $a \times b = c$ when logarithmic scales are used.

In the formulæ $C = {}^{m}\sqrt{a} \times b^{n}$ the "a" axis is graduated to scale m log. a, and the "b" axis is graduated to the scale n log. b. The construction is identical with the above.

Prof. Lipka, in his work, "Graphical & Mechanical Computation," has reduced the number of nomographs down to some 14 or 15 distinct varieties, all of which are to a considerable degree dependent on the simple forms illustrated above. A review of an equation will generally indicate the characteristic nomograph which can be rapidly constructed.

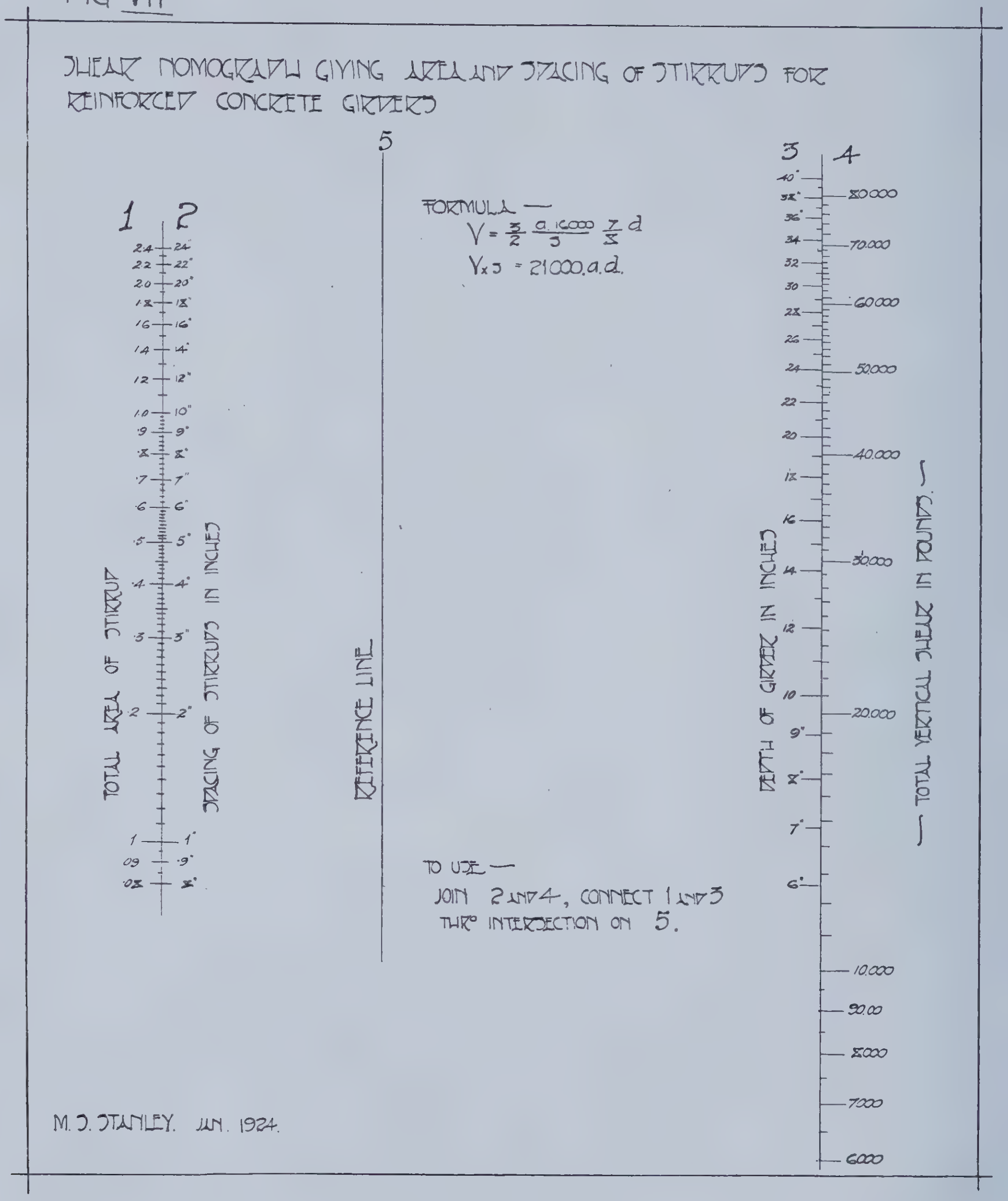
Following the above methods, the writer has constructed a number of diagrams applicable to Reinforced Concrete Design. When once thoroughly understood, their use will give correct solutions to an infinite number of cases much more rapidly and with less liability to error than the present graphs in use.

Fig. VI.—Nomograph for Shear and Bond in concrete girders.

By connecting and continuing the values of total vertical shear in "3" with the shear stress in "5" to intercept line "2," an infinite number of values of B & D ("1" and "4") can be secured which satisfy the equation—$v = \dfrac{V}{\frac{7}{8}\,bd.}$

Where v = unit shear in pounds per sq. inch.
V = total vertical shear in pounds.
b = breadth of girders in inches.
$\frac{7}{8}d$ = lever arm in inches.

FIG VII



The intercept on Reference or index line "2" is merely a reference point through which all lines intercepting 1 and 4 must pass to give a correct solution.

Similarly, as the Bond Stress is a function of the Total Shear, this nomogram will also solve the equation for bond stress $V = \frac{7}{8}$ d.u. Σ_o

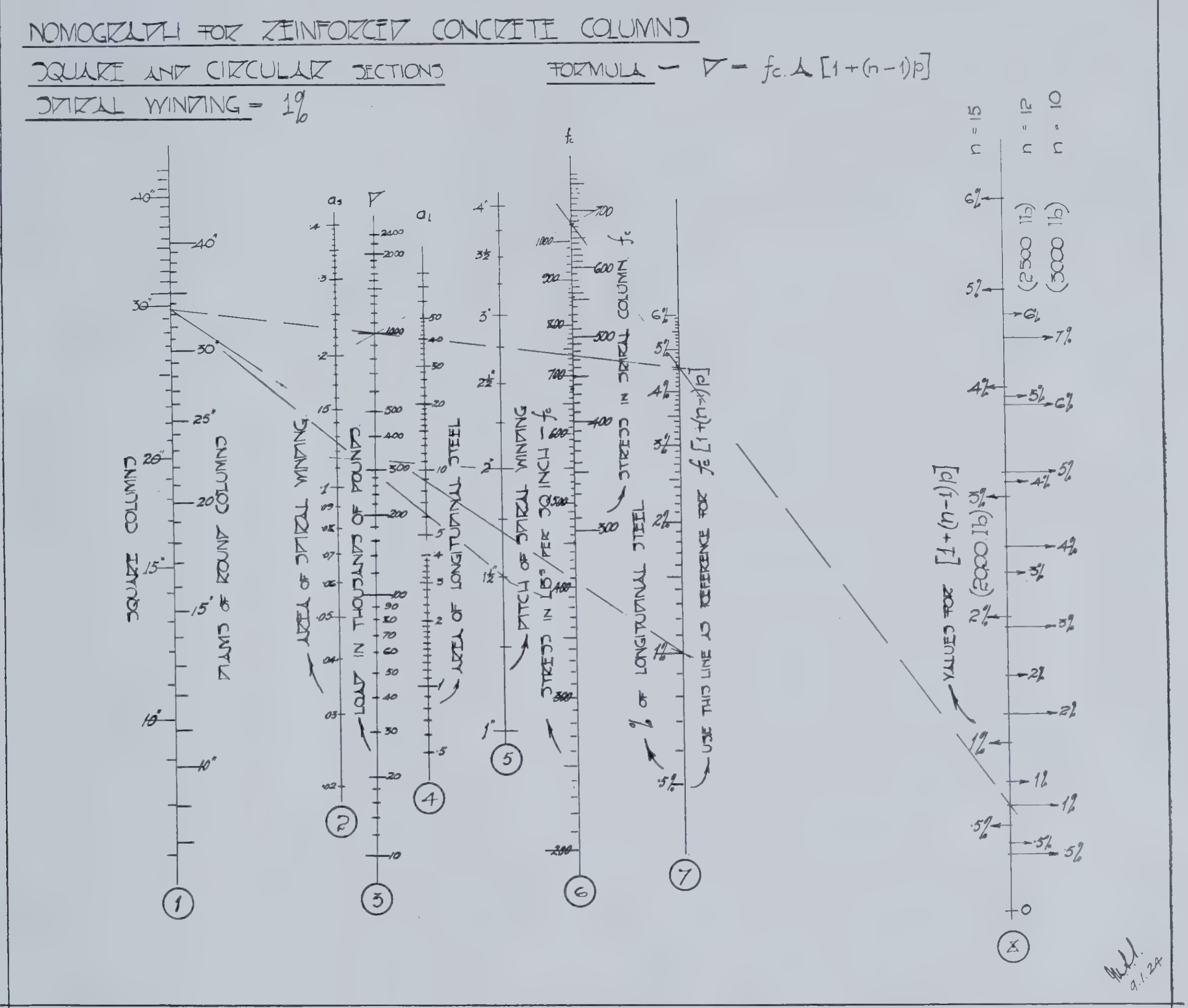
u = allowable bond stress per sq. inch,
i.e., 80 lbs. for plain rods.
$\frac{7}{8}$ d = lever arm of girder in inches.
Σ_o = sum of perimeters of rods in inches.
V = Total Vertical Shear in pounds.

Connect values of 5 and 3, continue to and intersect reference line "2," through the intersection join 1 and 4, the value of total perimeter of rods required is given in 1.

Fig. VII.—Nomograph giving total area and spacing of stirrups for any value of vertical shear between 6,000 and 80,000 pounds. Formulæ:—

$$V = \frac{2}{3} \frac{a.\ 16000}{S} \frac{7}{8} d.$$

FIG Ⅷ



Where V = total vertical shear in pounds.
a = total area of stirrups in sq. inches.
s = total area of one stirrup in sq. inches.
d = depth of girder in inches.

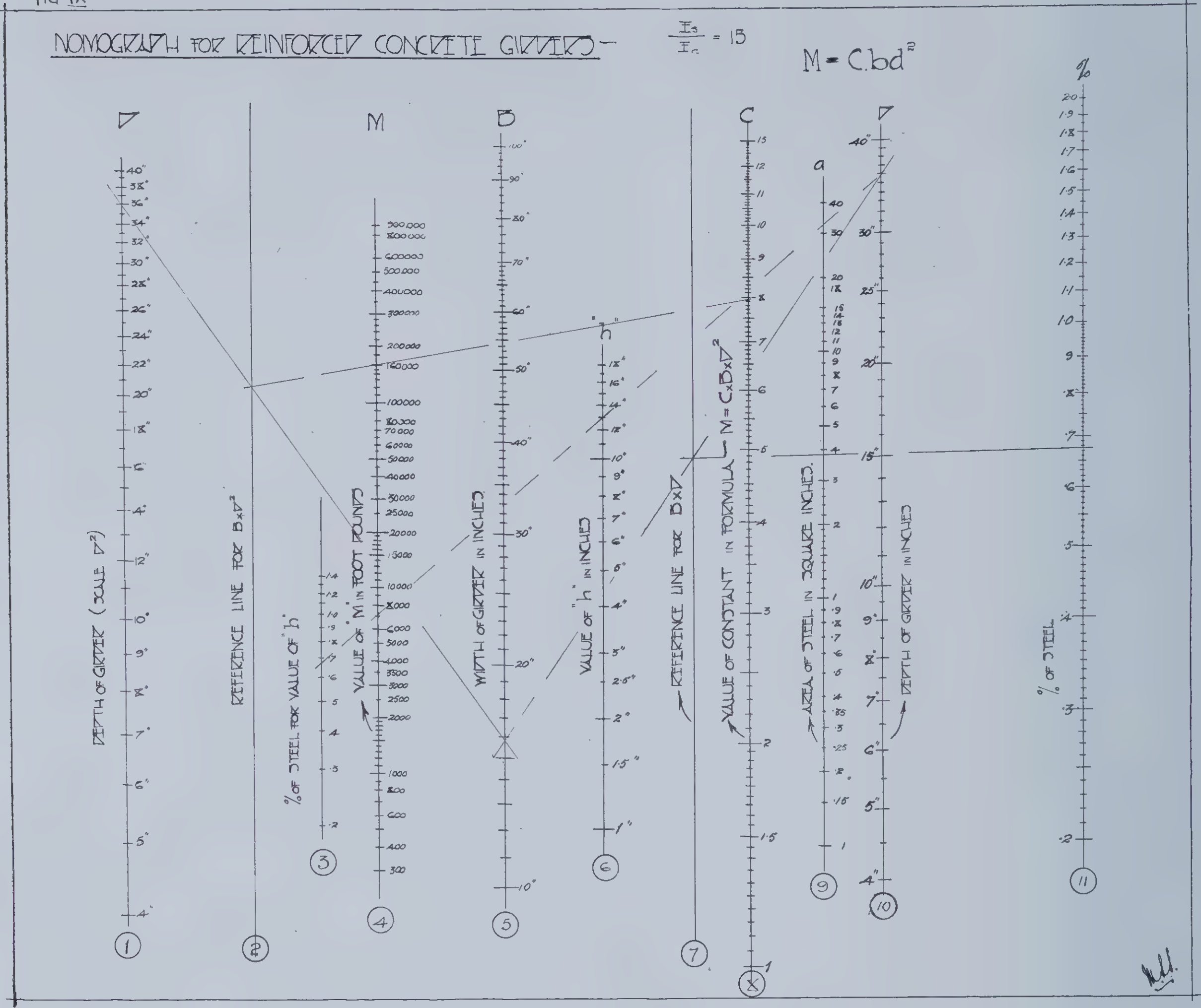
Concrete in this case takes one-third of the total shear, balance is taken up by steel. By connecting 2 and 4 through intercept on reference line join 1, 3, all values within the limits of the graph are immediately solved.

Fig. VIII.—Nomograph for Reinforced Concrete columns, circular and square sections, either spirally or longitudinally reinforced for values of "m" = 15, 12 or 10, with varying percentages of "longitudinal steel" from 1 per cent. to 6 per cent. of effective column area, and for 1 per cent. of "enclosed volume" of spiral steel of varying pitch. The graph gives the areas of longitudinal steel and spiral steels, and satisfies completely (within the limits of the graph) the equation—P = fc A [1 + (n — 1) p].

Where P = total concentric load on column.
fc = stress per sq. inch on concrete.
A = effective area of column.
$n = \frac{Es}{Ec}$
p = percentage of longitudinal steel = $\frac{A}{100}$

The effect of spiral winding when 1 per cent. of "enclosed volume" is used is to increase the allowable stress (according to recognised authorities) 55 per cent. The area and pitch of spiral winding to give this 1 per cent. ratio is provided in the graph. The scales denoted on the graph are from left to right.

FIG IX


NOMOGRAPH FOR REINFORCED CONCRETE GIRDERS —
Es/Ec = 15
M = C.bd²
D
M
B
C
D
h
a
%
DEPTH OF GIRDER (SCALE D²)
REFERENCE LINE FOR B×D²
% OF STEEL FOR VALUE OF 'h'
VALUE OF 'M' IN FOOT POUNDS
WIDTH OF GIRDER IN INCHES
VALUE OF 'h' IN INCHES
REFERENCE LINE FOR B×D
VALUE OF CONSTANT IN FORMULA M = C×B×D²
AREA OF STEEL IN SQUARE INCHES
DEPTH OF GIRDER IN INCHES
% OF STEEL
①
②
③
④
⑤
⑥
⑦
⑨
⑩
⑪
ⓧ

1. Dimensions of round and square columns from 7″ to 40″.
2. Area of spiral steel from .02 sq. inches to .4 sq. inches.
3. Concentric load in thousands of pounds from 10,000 pounds to 2,400,000 pounds.
4. Area of longitudinal steel from 0.5 sq. inches to 50 sq. inches.
5. Pitch of spiral winding from 1″ to 4″.
6. Stress in longitudinally reinforced column from 200 lbs. per sq. inch to 1,000 lbs. per sq. inch. The upper right hand scale gives stress in spirally wound column.
7. The percentage of longitudinal steel from 0.5 per cent. to 6 per cent. These points, when connected with 1, will give the area of steel required in 4. Reference line on right side of the line.
8. Value of steel percentage for various values of n — 12, 15, 10.

* The lines shown on the chart give the solution for a spirally wound column under the following conditions: Concrete, 3,000 lbs.; load, 1,000,000 pounds; with a percentage of longitudinal steel = 1 per cent.

Lines show column 33.5″ diam. (effective).
Area of longitudinal steel = 8.8 sq. inches.
Area of spiral winding = 0.126 sq. ins.
Pitch of spiral winding = 1½ inches.

The example is chosen at random. There is, however, quite a possibility that this nomograph is too cramped for general service.

It is possible to complicate the nomograph by asking it to show too much, and this Column Nomograph could easily be subdivided into two sheets.

Fig. IX.—Nomograph giving data for single and double reinforced rectangular concrete girders.

The nomograph gives the complete solution for rectangular girders; it solves and gives an infinite number of values for the formulæ $M = C\ b\ d^2$.

Where M = B.M. in foot pounds.
C = constant.
b = breadth for girders in inches.
d = effective depth of girders in inches.

It gives the depth to the neutral axis "h" from compression face for any percentage of steel.

It gives the area of steel required.

Foot pounds are used for "M"—these are more conveniently handled than inch pounds.

Values of "C" for any combinations of stress are given in works on concrete, and a schedule of common stresses can be attached to the graph. The relations between "C," percentage of steel, and stress ratio, *is fixed*.

The lines reading from left to right are:—

1. Depth of girder in inches from 4″ to 40″ (scale used—d^2).
2. Reference lines giving product of $b \times d^2$ (not tabulated).
3. Percentage of steel for use with lines 6 and 10 for finding "h"—depth in inches, from compression face to neutral axis.
4. Value of M in foot pounds from 300 to 900,000.
5. Width of girder in inches from 10″ to 100″.
6. Value of "h" in inches from 1″ to 14″.
7. Reference line giving product of $b \times d$ (not tabulated).
8. Values of C from 1 to 13.
9. Areas of steel from 0.1 sq. in. to 40 sq. ins.
10. Depth of girder in inches from 4″ to 40″.
11. Percentage of steel from 0.2 to 2.0 per cent.

The range of the graph is sufficient for the majority of cases met in practice.

To use the graph, assuming that the B M and limits of value of stresses in concrete and steel are known—

Connect 4 and 8 to 2.
Connect 2 with 1 and 5.

This line, 1-5, when rotated about reference point on 2, will give a great number of separate values for "b" and "d," all of which solve the equation $M = C\ bd^2$.

To determine area of steel for any section thus determined, join line "1" with line "10," connect the intersection on 7 with percentage of steel on line 11—the area of steel required is read direct on line 9.

Example shown.—A girder is required to carry 160,000 ft. pounds; allowable stresses to be 16,000—600, find size of girder assuming that maximum depth allowable is 36″ (effective).

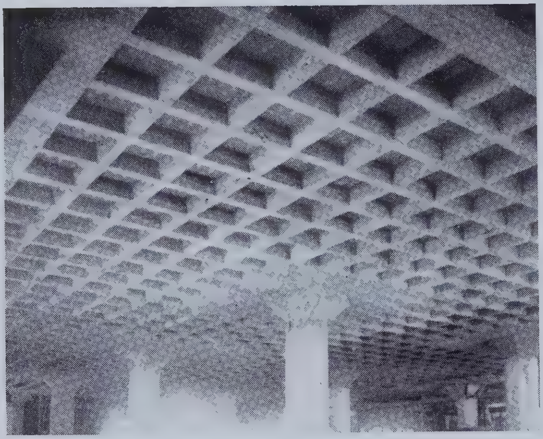
For 16,000—600, — $C = 7.92$.

Connect 160,000 on M line with 7.92 of C line to reference line $b \times d^2$. Join line from depth of girder line 36″ through intersection on reference line No. 2 to intersect No. 1 line, result = 15.8″ wide.

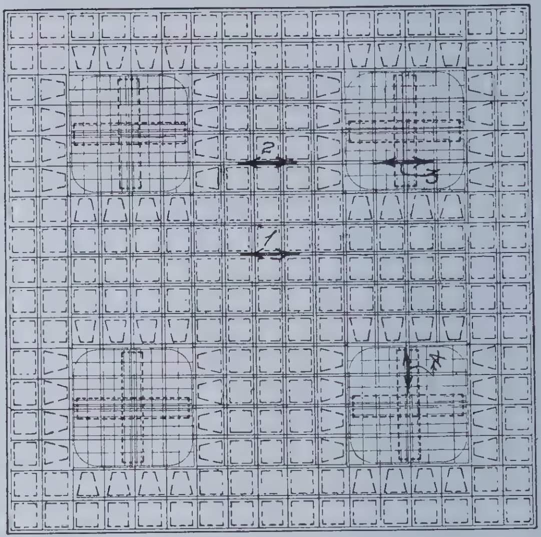
It will again be observed that by rotating the line d^2 — B about the intersection on the reference point on line No. 2 a range of values can be secured, all of which will give a correct solution to the case. The lines continued give the steel areas required for any particular case. Similarly, the values of "C" or "M" may be immediately solved for any given case.

In introducing the Nomograph or Alignment chart, I do so in the hope that its use may become more general in Reinforced Concrete work. It presents a wider application, and solutions of numerous problems can be rapidly effected with a minimum of waste effort.

The examples of nomographs shown are entirely dependent for their general instruction on Figs. I., III. and IV.—other forms exist for giving expression to similar formulæ, but I have endeavoured to solve the simplest and most generally used reinforced concrete equations by using only the most elementary form of nomograph.



The Hollow Tile Floor Structure.



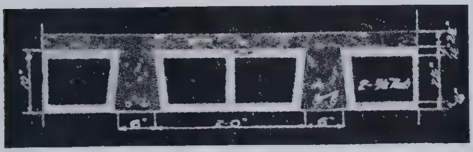
Test Floor erected and tested.
Plan showing structure of floor.

REINFORCED CONCRETE FLOORS

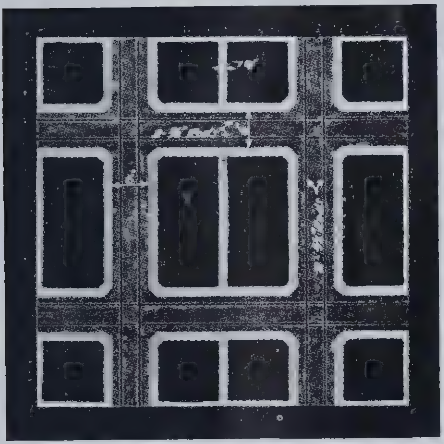
Actual work in Reinforced Concrete Structures soon convinces one that the only feature to-day, where further gain in economy, reduced first cost and increased construction speed can be secured is by a close study of the floor design. It is not easy to see that any further reduction is at present possible in walls and columns, but a study of floor arrangements and conditions lead one to suspect that further economies can be made over the ordinary Slab and Girder types. A definite evidence that this is so is to be seen in the number of floor systems in evidence to-day.

Much of our concrete practice is fashioned on American conditions; we are inclined to forget that America has advantages we do not possess, i.e., cheap timber and cheap cement. A study of Australian Reinforced Concrete Costs will soon show that the three items, i.e., cement, steel and timber moulds are the heaviest items in any concrete work, and any progress towards reducing any of these factors will do much to further the interests of Reinforced Concrete. The primary price of cement and steel and timber is outside the province of the constructional engineer, but often a thorough and intelligent analysis of the actual work and conditions, combined with a wide experience in the field, will do much to reduce the actual cost per cubic yard of concrete in place. The use of Hollow Lumber to floors has done something towards solving floor efficiency, and during the past few years it has been interesting to watch the growth of Hollow Tiles to concrete floors. The single way tile is widely used in Melbourne and South Australia to-day. Clay tiles and those of Coke Breeze Concrete are in service—the type of tile selected being usually determined by the question of cost,—whilst the size and depth of the tiles used is governed by the local conditions of span, load, etc. The use of Single Way Tiles will eliminate *secondary girders*. The formwork is extremely simple and lower in cost owing to reduced labour and timber quantities than is the case in ordinary slab and girder type of floor. Again, the lower surface of the tile, besides forming a portion of the soffit of the floor, also reduces the superficial area of lagging required by at least 20 per cent. Contractors who have used the hollow lumber for floors are enthusiastic respecting the "form" simplicity; this is particularly so in the case of the "single way" tile, i.e., one in which the tiles run direct from main girder to main girder. The "single way" tiles have been used in spans up to 29 feet under a live load of 140 lb. per sq. ft. Spans of 20 feet are common and economical. The ceiling is plain and free from projections of any kind.

In construction the tiles are laid in lines from main girder to main girder, and arranged so as to leave a trough of required width between them. In this trough is placed the steel. The troughs are then



SECTION THROUGH A-B



PLAN

Plan showing method of construction. Note the Two-Way Reinforcement.

filled with concrete, and a sheet giving about 2 inches to $2\frac{1}{2}$ inches thickness is placed over the tile; the result is the formation of a number of small definite "T" beams which admittedly produces the most economical distribution for the materials used. The "T" beams have centres of approximately 2ft. to 2ft. 6in. The dimensions of the leg of the "T" is controlled by the diagonal sheer, whilst the steel area required throughout conforms with recognised formulae for "T" beams, except that, in this case the whole of the top Flange is in compression. A number of well-known buildings in the other States have these floors.

The single way type of tile floor is subjected to the usual formulae for Bending, and these floors have given every satisfaction. Their only disadvantage is that for maximum economy a greater overall depth of 2in. to 3in. may be required when compared with the thickness of solid slabs. Possibly the elimination of secondary girders compensates for this.

It is also stated that Hollow Floors give more silent floors, but the writer has had no opportunity to conduct a test. Opinion is divided. Plastering troubles are considerably reduced, for the Breeze tile surface gives a first-class "suction" to the plaster coats. Again, owing to the plain surface plastering costs are reduced, and better lighting and ventilation must exist. In the earlier floors for large single-span work, the writer and others formed the "T" section in the floors by the use of prepared timber forms. A span of 29ft. x 80ft. with 140 lb. loading, was built in Gouger Street, Adelaide; the site being 29 x 80, and the ultimate 5-storey building will be entirely free from internal columns.

The moulds for single way tile floors may consist of planks of approximately 10in. x $1\frac{1}{8}$in. section, spaced approximately 2ft. 6in. centres and resting on simple bearers. The tile, which is 18in. wide, bridges across the opening between the boards with 2in. bearing each side. This accounts for the reduction of sheeting. The result is completely satisfactory. From my observation only a minimum of care is required to prevent the tiles moving whilst the concrete is being placed. Usually the 2in. to $2\frac{1}{2}$in. sheet of concrete over the tiles is reinforced with $\frac{1}{4}$in. or $\frac{3}{8}$in. round steel spaced from 12in. to 18in. pitch.

The single way tile affords a simple and effective method for spanning considerable openings economically. It is open to the objection that the stresses are taken up in one direction only; no allowance is made for the transverse strength in the slab. It, however, has a distinct advantage in that the dead weight of the floor is reduced to a minimum.

Experiments conducted at the Adelaide University during last year on rubber slabs appear to indicate that remarkable economy can be gained by taking up stresses in more than one direction. The outstanding case illustrating this is evidenced by the growth and popularity of the Flat Slabs. Here we are enabled to design and to take up the stresses in combined directions.

Interest in the Flat Slab or Mushroom type of floor lead the author to apply Hollow Tiles to Flat Slab Floor construction, Some two years ago my Adelaide office prepared a flat slab floor design, using breeze concrete blocks for a structure in South Australia. I placed solid tiles symmetrically round the centre point of the Flat Slab panel, but did not extend same outside a line joining "the drop panels." The treatment was met by considerable discussion, during which Professor Chapman suggested that it appeared quite reasonable to use tiles in the soffit of a flat slab panel, in "positions of positive Bending Moments." After further investigation I installed this "ribbed floor" in one of the largest structures in South Australia. Work commenced in May of last year and is now completed. In effect it really means that much of the concrete below the neutral axis is either removed entirely or displaced by the use of hollow lumber.

To confirm the type a full sized test floor was laid down 43 feet square resting on 4 columns 22ft. 6in. centres, with smaller columns to support the outside edge. The floor consisted of Hollow Tiles 7in. deep and 2ft. square laid chess-board fashion as shown in the detail. Steel was placed in the 6in. troughs formed between the tiles, and this steel, intersecting at right angles, gave a result similar to a two way reinforcement system in a flat slab floor (no steel was placed in the concrete sheet over the tiles). To assist the shear around the column heads the size of tiles in plan were reduced to give increased rib dimensions. The basis of the design was a live load of 80 pounds per sq. ft. The concrete was then placed, giving 1in. cover over the tiles, the total depth being 8in. Including the column heads, the quantity of concrete used was equivalent to a 4½in. solid slab, and the weight of steel per sq. ft. 1 1-3rd pounds. To increase the interest in the test the big mushroom column heads were replaced by 4 cantilevers running out from each of the square columns to the soffit of the slab, mixture 4.2.1. No especial care was taken with the erection, the intention being to reproduce as far as possible actual working conditions.

Heavy rains fell during the placing and subsequent to the completion of the test floor. The slabs had every opportunity to mature, but after some 5 or 6 weeks we drove a 3in. nail into it when fixing the deflection rods. Prior to the test, wood pegs were driven into the ground. Fixed to the soffit of the floor were placed rods arranged to move alongside the pegs, so that as the load was placed we were able to read the deflection movements with considerable accuracy. The deflection, whilst interesting, was not reckoned so important as the actual distribution of stress in the steel throughout the floor, and Prof. Chapman, with his assistant Mr. Gibbs, kindly watched the steel deformation, using the microscope described in their combined paper on "Stresses in Circular Plates" with considerable success. Portions of the steel in what were considered vital points were exposed, and during the test direct readings were taken. The following is Professor Chapman's complete report:—

> "We inspected the experimental hollow tiled R.C. floor erected by Mr. Stanley on 10/7/23. It had then been built about 6 weeks and the concrete was still rather green, in fact, a nail was driven into it without difficulty. The floor was 43 feet square and 8 inch deep over all, and was supported on four columns at 22ft. 6in. centres, as shown in the blue print. In addition, a few small columns had been put in as supports round the edge in preparation for the test the reinforcement was exposed in four places on the top surface in two directions at right angles over one column, and on the lower surface at the centre and at the middle between columns. By means of a special gauge the reinforcements were marked with fine markings 8 inches apart. We did not arrange for the measurement of deflections, as it seemed more useful to determine the stress in the reinforcing bars, but Mr. Stanley had attached wooden bars at the centre and midway between the columns so that the deflections could be conveniently read relatively to similar upright bars fixed in the ground below. This method of measuring deflections is obviously unreliable if there is any sinking of the foundations of the columns upon which the floor rests, and we have every reason to think that, during the extremely wet weather that prevailed during the fortnight over which the tests extended, such sinking actually occurred. Now that all the tests are completed and the loads removed, the whole of the marks, both at the centre and in between the columns, show a uniform sinking of 9/16 inch, which is almost certainly due to the sinking of the foundations.
>
> On 12/7/23 the floor was loaded with quarry sand over an area in the middle of the slab 24 feet square up to 120lbs. per sq. ft., in addition to its own weight. An hour or two after the load had been put on readings were taken of the extensions of the rods, at the points previously marked, by means of a special micrometer arranged for the purpose. The readings of the extensions of the rods over the length of eight inches were:—
>
> 1.—In centre of slab (underneath): 2 divisions of micrometer.
> 2.—In between column brackets (underneath): 7½ divisions of micrometer.
> 3.—Was unfortunately found to be on a column yoke instead of one of the floor bars, and so was valueless.
> 4.—On same bar as 2, but on top of slab over column bracket: 4 divisions of micrometer.
>
> The positions at which these readings were taken are shown on blue print attached.
>
> Each division of the micrometer represented one-thousandth of an inch, so that one division represented a stress of 3800 lbs. per sq. in. in the bar approximately, taking the modulus of elasticity as 29,000,000 lbs. per sq. inch.
>
> The stresses in the bar due to this loading were, therefore, very approximately:—
>
> 1.—7600 lbs. per sq. in.
> 2.—28,500 lbs. per sq. in.
> 4.—15,200 lbs. per sq. in.
>
> The loading was left on and very heavy rain fell on the next day. In the afternoon of 13/7/23 the readings were again taken, the sand being now well soaked with water. No change had taken place, except in the centre at 1, where the stretch had increased to 2½ divisions, equivalent to 9500 lbs. per sq. in. Fine concrete cracks were showing in the neighbourhood of 2.
>
> On the next day, 14/7/23, the load was extended to the same depth over an area about 24ft. x 40ft.,

> the additional load being on the overhanging ends and not in the centre of the slab. This had no readable effect upon the extensions of the rods, and the micrometer readings taken were the same as before.
>
> The micrometer method of reading the stretch of the bars proved so good that two other bars, numbered 5 and 6 in the blue print, were now exposed and marked, with the object of noting to what extent they contracted when the load was removed. The loading at this stage was estimated at 132lbs. per sq. ft., trials showing that the wet sand weighed 122lbs. per cubic foot.
>
> This load remained on till 25/7/23, when Mr. Stanley, as shown in the photograph, increased the depth of the sand on the slab to 2 ft., thus making the load 240lbs. per sq. ft. No extensometer readings were taken with this load, which was removed on the following day, and after the removal of the load the micrometer readings were again taken.
>
> The final readings showed that the bars exposed at 1, 2, and 4, completely recovered themselves. In no case was any permanent set whatever observable, and the small cracks that had been visible when the load was on were completely closed and almost impossible to detect. The readings at 5 showed the loading of 132lbs. per sq. ft. to have caused a stress in that bar of 9500 lbs. per sq. in Unfortunately, at 6, the bar exposed turned out to be one of two overlapping bars, so that the readings were not of value.
>
> The stresses given above are those observed due to the live load only, and do not include those due to the weight of the slab itself.
>
> This being an experiment, Mr. Stanley had deliberately cut down the quantities as much as possible, and the thickness of concrete on top of the hollow tiles was only 15/16 inch. Yet in spite of this the floor behaved as a slab, and the complete recovery after such a heavy loading showed that even with 240lbs. to the square foot the materials had nowhere been strained beyond their elastic limits. The heavy stress observed in the rod at 2. which was expected, could easily be diminished by a slight modification of the design, or by the addition of a little more steel at that point.
>
> I consider the test was most satisfactory, and showed that this type of floor may be safely designed to carry heavy loads."
>
> (Sgd.) R. W. CHAPMAN,
> Professor of Engineering,
> Adelaide University.

After 10 days of the 132 lb. load I increased it to 244 lb. per sq. ft., when minute cracks appeared running along the centre of the floor soffit at right angles to each other and parallel to the edges of the floor. These cracks were exceedingly fine and could only be observed after the closest inspection. They were uniform in width throughout their whole length and synchronised with very fine microscopic cracks which appeared at the tips of the cantilevers. Deflection observed under the load of 240lb. per sq. ft. was approximately 7-8in. at the centre of the slab. After removal of the loading the recovery of the steel was complete—no permanent set being observable. The total test load was 63 tons.

It is seldom an engineer has the opportunity to test his ideas prior to trying them out, and I am indebted to Messrs. James Bell and Co., and Mr. Innes, of Melbourne, who carried the whole cost of the test floor, and whose work with Breeze Concrete Tiles has done much to increase interest in this form of floor construction in the other States.

A full-sized test eliminates much argument; and it was hardly complete when my office had the opportunity to use it in practice. Competitive designs and tenders were called for Messrs. Duncan and Fraser's new structure, Adelaide. By using the floor fashioned after the type of the test floor, a direct cut in the cost of floors alone amounted to over £4000 as compared with the cost for a solid flat slab floor over similar spans (approximately 25ft.), carrying the same load, the work being secured by Messrs. Townsend and Frazer, contractors, of Adelaide, the Architect being Mr. Norris, of Melbourne. The structure when complete would contain 140,000 sq. ft. of floor area. Work commenced in May, 1923, and is now about completed (Feb., 1924). This structure is the first to adopt the floor in Australia.

The solid flat slab floor, whilst *economical* in steel as compared with the slab and girder, is *not generally* more economical in concrete. The chief advantage lies in the simple mould forms. The cost of beam and girder floors is much increased by the trimming and lagging of the girders, whereas in the Solid Flat Slab floor there is no need for interior girders except in special cases, i.e., round openings and under concentrated loads.

To reduce the concrete quantities the "drop panel" type came into existence. This necessitates mould trimming around the drop panel. Again, over long spans the minimum slab thickness is limited by the deflection; for long spans and light loads the solid flat slab is generally uneconomical as compared with slab and girder types. These are the factors which encouraged the development of the Hollow Flat Slab, and the results are justified, for not only are the quantities of steel and concrete reduced, but the mould work is simplified, and the dead weight of the floor is a minimum. Again, with a Hollow Flat Slab floor, the heavier the floor loading the greater becomes the floor efficiency. The saving in steel and concrete when compared with the solid flat slab may be as high as 10 per cent. in ordinary work and 30 per cent. in favourable cases. The final result is that the floor slab is split up into a series of "T" beams in which the stresses are absorbed in two directions. This combined method for taking up stresses will lead to greater economies in future work. Prof. Chapman's paper stresses in circular slabs, and also Flat Slab tests would indicate a wide field for thought and further experiment.

To facilitate the formation of the ribs running at right angles under the floor and at the same time provide simple means for producing a- finished ceiling, it is proposed to use Hollow Tiles of some material like breeze concrete, the full intention being to use the hollow tiles to create shape only—not to absorb any stressses. The tiles are produced very cheaply, and are rapidly handled owing to their light weight.

Again, with the use of tiles it is not necessary to sheet the whole of the ceiling. This saving in sheeting is considerable, 10 to 20 per cent. less superficial area being required. Against this the section of timber used is slightly heavier. The number of "Tomms" required will be practically the same as in the solid floor; they will, however, all have the same length.

In Duncan and Fraser's floor the ribs were formed by the use of collapsible timber boxes. These were used repeatedly during the work. Reproduction soon accustomed the workmen to them, and the costs were light. The finished work was specified to be finished "as from the moulds," and the photographs will show the neatness of the completed work.

The floor installed in Duncan and Fraser's garage has a very pleasing appearance; the domed ceiling is attractive. It is the cheapest "cost in place" floor known, and the removal of the concrete from the soffit does not weaken the slabs in any way. The absence of projecting main girders gives an enhanced head room and it has the advantage of a minimum dead weight, with its attendant economy of steel; to this one must take into account the increased economy in concrete materials and labour.

Since developing the floor I notice that a similar type is being used in America, and a number of structures there have adopted it with success, using steel forms to create the ribs. This, however, involves special considerations for fixing the ceilings.

An investigation of the steel form costs appears to indicate that their cost prohibits their use in this country. Apart from the mould cost—created to a large extent by the quantity and variety of depths required—a steel form Hollow Flat slab floor from which the steel forms are removed would not pass the Fire Underwriters' requirements without a sacrifice of economy, the minimum concrete thickness laid down being 4½in. This thickness is secured by the use of cheap hollow breeze tiles which, having walls 1¼in. thick, gives 2½in. Breeze concrete. This, added to the cover of 2in. to 2½ in. of 4.2.1. concrete over the tiles, produces the necessary 4½in. thickness.

This floor is now being exploited under the name of the Innes-Bell floor, and the Fire Underwriters have handed to James Bell and Co. a first-class certificate.

COLONEL WELLS: I do not know if I am too early in proposing a very warm vote of thanks to the lecturer. He certainly gave us a lecture which is worthy of the great body of Engineers to which he belongs. He has shewn us that he himself personally has been not a mere imitator of what others have done, but he has been progressive, and he has shewn us the direction in which his talents have been employed, in the endeavour to reduce the cost of work by introducing practically a new system. I think he is to be congratulated on the result. I understand that he is able to reduce the cost by about 50 per cent. over the ordinary flat solid type of building, and surely that is something a man may be proud of, especially when he knows that his work has stood the test of time. The lecture was most interesting from the student's point of view, and I regret that there are not more of the younger members of the profession here. I am satisfied that in reinforced concrete work every architect of the future must be his own engineer. He should not have to rely upon outside help. To-night the lecturer shewed that it is not such a complicated thing to be able to design a reinforced concrete building. I am sure any student who has been through the ordinary elementary work in connection with the theory of stresses and strains, with the aids of these normagraphs, should be able to design all great structures as far as I have seen them in the City buildings.

There appear to me to be, broadly speaking, two methods of construction. One is really the steel structure, covered with concrete, reinforced concrete floors, and so on. The other is purely reinforced concrete stanchions, beams, and floors. Some architects here, I think, will stick rather to the methods of the steel structure in preference to the purely reinforced concrete. I feel that there must be some reason, and one reason I think is that we have had reports from America where the reinforced concrete structures have failed. So far, in this country we have really had no failures. Why is that? Perhaps we have benefited by the experience of others in America, who have done the experimental work, and have paid the piper accordingly. I do not think there is any likelihood of failures so far as the main structures of our City buildings are concerned, but I have noticed a few buildings that I feel a little doubtful about. We are using porous material on great heights with no very great thickness. We must bear in mind that all materials expand and contract differently according to variable temperatures, and are more or less porous. I am wondering whether in say, 20 years' time, some of our buildings will be regarded as absolutely safe. It behoves us to adopt a method that will ensure stability for at least 100 years. Great structures, of course, may fail through poor concrete, or materials not being mixed in the proper proportions, or not being placed in their right positions. I think the last is most important, and I am satisfied that no reinforced concrete building should be erected unless every bit of it is under the closest inspection.

I move a hearty vote of thanks to Mr. Stanley for his interesting and educative lecture.

MR. ANDERSON: I am one who has always regarded reinforced concrete with a certain amount of suspicion, particularly as one has to depend so much upon an unknown factor, that is, the man behind the shovel. In the illustrations of the concrete structures in Adelaide, I did not notice any signs of machine mixing, which to some extent eliminates the difficulties. It was interesting to see and hear of those terribly intricate formulae; and one is delighted to know that by just taking a rule, one can find out depths, heights, breadths, areas and proportions. Certainly that was most interesting to me. Formula was really the bugbear of my existence. Unhappily, there is only one book in the library which contains that information. The illustration explained everything. I wondered what stresses came on those hollow tiles. Then the next picture shewed a floor with hollow tiles, shewing that the stress must be very little indeed. The cost of making them was another question. The lecturer answered that when he pointed out that he had reduced the price to about £4 a yard. We live in a progressive age. Some time ago an inventor stole into my office. He brought a new idea. I said to him, "I wish I had the power to shut you villains up." We have no sooner mastered one type of structure than up comes another, and we have got to scrap all we knew and take up something fresh. We had a great fight to get concrete even acknowledged. In vain we pointed to the glories of Melbourne, but we got it at last; and one does like to know that one of the great obstacles to concrete, that is, the cost, is able to be reduced. We get a flat ceiling, which perhaps artistically is not quite so attractive as the old style, but I suppose one will have to change one's artistic values as well as one's constructional values.

I am very grateful to Mr. Stanley for his lecture, and it affords me great pleasure to second the vote of thanks.

MR. WATERHOUSE: I think Mr. Stanley has put before us a most difficult subject in a very able manner. I was impressed with the lucid way in which he explained the normagraphs. One can also realise the very great difficulty that the mathematicians must have had in deciding the ratios in regard to distance back of the vertical lines. That seemed to be the solution of the whole thing. I would like to get hold of that book. I feel that with Mr. Stanley's diagrams available we could go into the matter. With regard to the cost of £8 per cubic yard and 10s. per foot super, that is interesting, and I take it the figures were based on comparatively light loadings. The spans mentioned were 20 ft., and I think in some instances 30 ft. I would like to ask Mr. Stanley, with any warehouse loading 300, would that class of floor be economical to use over the spans that he has mentioned, because it seems to me that unless we can use the floor the depth becomes so great that obviously the cost will probably about equal our ordinary class of construction. I think it is in regard to heavy loadings we will have to consider it.

I would like to know particularly in regard to the cost of the heavier loading on the spans that have been mentioned.

I add my thanks to the lecturer for his entertaining and interesting address.

PROFESSOR WILKINSON: I support very heartily the vote of thanks which has been proposed to the "wizard of the normagraph." He tried to put the blame on first, a Pole, then a Frenchman, and then an American, but I think he has got to bear a great deal of it himself, especially in putting it so clearly before us. One of the great advantages of those floors would be that they are likely to be very much more sound-proof than the ordinary solid floor. The solid floor is anything but sound-proof, and the roof is generally very bare, necessitating more money being spent in putting in a ceiling. There were other questions I was going to ask, but Mr. Stanley arranged his slides so well that they generally came on and answered the very questions I was going to put. It is satisfactory to realise that a piece of permanent structure comes out cheaper than the false work that has to be scrapped. I would like to draw attention to the fine effect that was produced in those ceilings where it was possible to leave out the boxes. I think the structural form was excellent indeed from the aesthetic point of view. The mushroom type is interesting, but I think it generally loses much of its interest when it is smoothed down. I would like to know whether these tiles are covered by any patents, or whether any contractor can make them. (MR. STANLEY: The two-way tile is a patent.) I have much pleasure in supporting the vote of thanks.

MR. LOUAT: I am very pleased to be here to-night and to hear Mr. Stanley. It is particularly interesting to know that reinforced concrete can be cheapened to such an extent. It would almost appear as though we have been wasting our clients' money; and I think it is the duty of the architects of Sydney to thoroughly investigate this system, and see how it really does compare in the matter of cost with solid construction. It is a pity that such a lecture has been delivered to so few members.

THE CHAIRMAN: To-night's lecture takes one's mind back many years. If I remember rightly, the pioneer of reinforced concrete work in Australia is Sir John Monash of Melbourne. I think the first example of anything like decent reinforced concrete work was a bridge over the Yarra near Richmond, under Sir John Monash's control. I knew Sir John very well, and I know what an uphill battle he had to try and make people take some interest in this new method, which was looked upon with great suspicion.

I think I have mentioned before that the modern trend of development in building construction generally is welding very much closer together the engineer and the architect. The lecturer has shewn us to-night the great possibilities of reinforced concrete work. We appreciate one point, that while this new method comes to us in the main from America, our own engineers, who are associated with developmental work, are not satisfied to take it all for granted, but are launching out for themselves in this new field. The cost of brick buildings is going up, and the cost of concrete going down. We are reaching a stage in which concrete and brick are about equal in cost, and it will not be long before the balance is the other way. The first example of concrete work in Sydney was, I think, Coote's jeweller's shop in George Street. I would like to add my personal appreciation of the lecture. One appreciates the fact that a brother professional from another arm of the service has come along to help us; and I ask you to convey your thanks by acclamation.

MR. STANLEY: In answer to enquiries, I may say that the work I mentioned carried 200 lb. per square foot for a 25ft. span. The cost came out at 10s. per sq. ft. With regard to the floor itself, I would have no hesitation in applying it to spans of 30ft. I think the saving would be greater the heavier the loading. In tenders which have been received in Melbourne during the past few weeks, the average saving for the whole floor was in the vicinity of £3 per square over the solid floor, which is quite a considerable item. In concrete work the cost, showing everything from the foundations to the top floor, would approximate about £8 per cubic yard, which is a reasonable estimate. Some portions would run into £10 and some into £4, but the average would be £8. That £8 includes £1 10s. for cement, £2 for steel, about £2 5s. or £2 10s. for timber. You will observe that the timber is one of the biggest items in the job, and is something which is absolutely discarded once the work is completed. Anything that can be done to reduce the price of timber would be a step in the right direction. The floor would maintain its efficiency the more you increased your loading.

It has been a pleasure to me to be here to-night. We as engineers represent a much younger profession than yourselves. Even to one who is associated the whole of the time with concrete the calculations are quite complicated, and it means that we have to give all our time to the work in order to progress and keep in touch with the times. I only hope that Australia will develop along her own lines individually as a Nation. I am satisfied we have work in Australia that will compare favourably with that in any other part of the world.

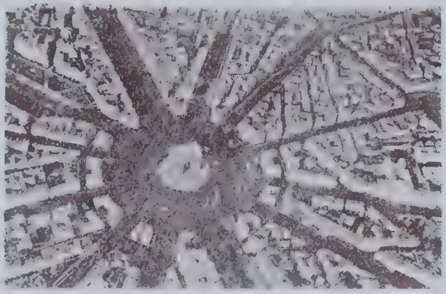
I desire to emphasise this, that I came along solely to introduce new forms of concrete work rather than to give illustrations of definite types. There is nothing commercial in my being here. I really came to show you something of the work in other parts of Australia. I thank you very heartily for your vote of thanks, and I trust I may be favoured to speak to you some time again.

Some of the slides, shown by Mr. Weekes during his lecture.

MONUMENTAL PUBLIC BUILDINGS

AUSTRALIA HOUSE.

PLACE DE LA CONCORDE.



PLACE ETOILE & ARC DE TRIOMPHE.

VALUE OF OPEN SPACES

EXAMPLE OF ARCH BROUGHT ABOUT BY THE ZONING REGULATIONS.

GREENWICH HOSPITAL.

BUSINESS SECTION.

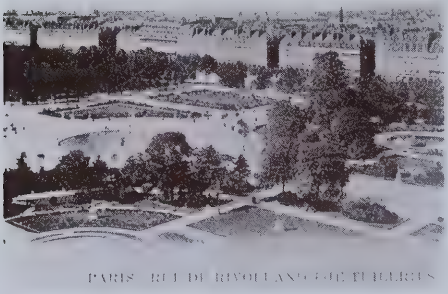
MARSEILLE PLACE DE LA BOURSE, E.L.

ELIZABETH STREET—CHAOTIC

REGENT ST. QUADRANT, LON.

TOWN RESIDENTIAL.

COUNTRY DOMESTIC.



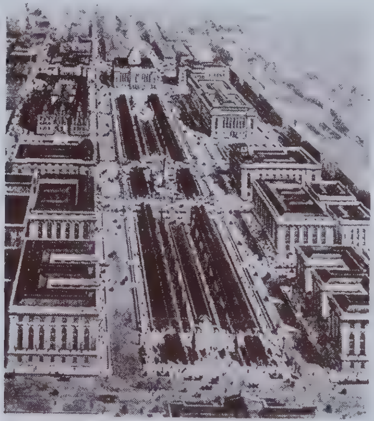
RUE DE RIVOLI ET JARDIN DES TUILLERIES.

ESSEN SUBURB ALFREDSHOF.

FREDENSBORG PALACE.

RECREATION.

WESTMINSTER BRIDGE AND RIVER.



ST. LOUIS CIVIC CENTRE.

HYDE PARK ENTRANCE.

DECORATION.

FLATBUSH AVENUE, BROOKLYN.

VAN NESS AVENUE, FRESNO, CALIFORNIA.

AVENUE INTERSECTION, AMERICA.

ST. MARKS, VENICE.

STREET, CALIFORNIA.

ARCHITECTURE

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ORDINARY GENERAL MEETING

LECTURE ON

CIVIC ARCHITECTURE

By Mr. NORMAN WEEKES, A.R.I.B.A., F.I.A.

13th MAY, 1924

THE PRESIDENT (Sir Charles Rosenthal) occupied the Chair.

The minutes of the Ordinary General Meeting held on the 8th April were confirmed.

The Chairman announced apologies from Mr. Hughes and Colonel Hurst.

The Chairman stated that as it was felt that students of both the University and the Technical College should be given the fullest opportunity of attending these lectures, invitations had been sent to them, and also to kindred Associations. Replies had been received from Mr. J. Nangle, Superintendent of the Technical College, and from the General Secretaries of the Institute of Surveyors, Institute of Engineers (Sydney Division), and the Regional Plan Convention. He was pleased to see representatives of some of those bodies present, and also some students from the College.

The next business was the admission of three new members—Messrs. Weekes, Nelson, and Dobson. The Chairman, in the name of the Institute, asked Messrs. Weekes, Nelson and Dobson to come forward and receive their certificates of membership.

THE CHAIRMAN: You may recall that at our last meeting I made reference to the fact that we had discussed with Mr Oakes, the Chief Secretary, the question of hospital work being done by various Government Departments, and we hoped that we might have an opportunity of presenting our views to the Chief Secretary, with the idea of insuring that hospital work might be, if our Committee so wished it, placed in the hands of outside architects. The case now arising is that of the Lithgow Hospital, and the Committee has officially asked the Chief Secretary to allow the Works Department to permit their plan to be seen by an architect whom they will nominate, with a view to giving them a complete scheme. We have made arrangements with the Chief Secretary to receive a deputation from this Institute on Thursday, 29th inst. Such deputation will consist of Mr. Anderson, our Vice-President, Professor Wilkinson, as representing the Chair of Architecture at the University, Mr. Godsell representing the Architects' Registration Board, and Mr. Waterhouse, our Vice-President. We purpose putting up a reasonable case, bearing in mind that the public subscribe liberally to hospital work. We feel, therefore, that if a Committee wishes to employ an outside architect, it has a reasonable amount of equity on its side, and I am hopeful that the Chief Secretary and the Public Works Department will be willing to agree.

We have also communicated with the Private Secretary of the Governor of N.S.W., asking his Excellency to nominate a date, between the 15th and 21st June, when he could attend our Annual Dinner. When the Governor opened our Exhibition he expressed his willingness to attend as our chief guest. As soon as his Excellency decides the date we will fix the function, and trust members will attend in good numbers.

We are also arranging for the Vice-Presidents, Treasurer, Secretary and myself to make an official call on his Excellency as representing our Institute.

GENERAL BUSINESS.

MR. MUNNINGS: I would like to state that in New Zealand at the time registration was brought in, the Government passed a law that all Hospital work should be done by registered architects. They considered that, having given architects registration, it was fair on their part to give them their support.

MR. ROBERTS: I would ask if amendments to the Registration Act are being submitted to the Institute, and if the Council will submit them to the Registration Committee. I take it any amendments should go to that Committee, they being more conversant with the subject than the ordinary architect.

THE CHAIRMAN: I think any amendments that are foreshadowed will automatically go to the Registration Board, as being the body directly in touch with the Government, and we have the assurance of Mr. Godsell, who is the Chairman, that matters of that kind will be referred to this Institute for every advice that can be given.

Mr. Weekes is faced with a great deal of responsibility at the present moment in connection with civic matters in the preparing and laying down of what he considers are the right schemes for the general advancement of his particular department; and those who are associated with Mr. Weekes in City Council life, myself perhaps particularly as Chairman of the Works Committee, are anxious to give him all the support possible. I am sure members will appreciate that, notwithstanding the strenuous work upon which he is engaged, he has found time to come here this evening. Mr. Weekes has been admitted as a member of our Institute, and it is very fortunate indeed that our new City Surveyor should also have qualifications as an architect, because the development of that particular part of our City with which the City Surveyor has to do can be much better carried out if he is a man who is able to combine with his qualifications as a surveyor the artistic training of an architect. Mr. Weekes is not only a Fellow but an Associate of the British Institute. We can safely say that Mr. Weekes' address will be one of interest; and I now have much pleasure in introducing him to you.

THE LECTURE

[During the lecture 50 lantern slides were shown some of which appear on pages 17 and 18]

I DO not know to whose inspiration is due the invitation that I should address you to-night, because I cannot claim to be regarded as having that specialist knowledge of Architecture which belongs to those who have by every-day practice devoted such constant attention and consideration as to render them more worthy to present the case. To that unknown person my thanks are due for the confidence, and since I have been asked I take it you desire, notwithstanding, to hear what I have to say on the subject. I believe I may claim, by a peculiar combination of architectural and engineering training, to have a particular vision of the subject not entirely possessed by either, and yet interesting to both professions.

DEFINITION.

I have taken "Civic Architecture" as my subject. It is as well to define what is comprised in this term. Analysed, we find Webster defining "Civic" as "appertaining or appropriate to cities," while of Architecture he uses the words "structures or forms." Tyndall speaks of "the architecture of grasses and ferns," and Ruskin refers to "other architectures."

The best definition of Architecture that I know is "construction with an aesthetic motive." One may therefore very properly derive this interpretation that "Civic Architecture" is the construction with an aesthetic motive of every structure, organic or inorganic which collectively make up the form of a city.

The ideal then before any civic architect must be the grouping of those motifs so as to secure the highest aesthetic value in the whole.

If I may quote what Sir Christopher Wren said of an architect—and it truly applies to a civic architect—namely, "he ought to be jealous of novelties . . . that which is commendable now for novelty will not be a new invention to posterity . . . and the glory of that which is good of itself alone is eternal."

It is no new world, and it lies with us all in some degree to make it what we would have it.

APPLICATION.

Now, an architect may be commissioned alone to design a building with full opportunity within his own sphere to exercise capacity for the right effect, and the limitations imposed by clients need not hinder; if anything, they rather amplify the scope of opportunity to clothe utility in a beautiful form.

But it seldom falls to the lot of any one or even a few individuals to exercise exclusively this opportunity to invest with beauty the utilities of a city as a whole, where there is even wider scope in the material with which one may give variety in texture.

So that where in these days of democracy there is none by virtue of whose autocracy Paris might again benefit by a Haussmann, Rome or Florence by a Bramante, or Washington by le Enfant—one may well be excused some wonderment as to how the problem is to be solved.

METAPHYSICAL.

There is a metaphysical aspect of every material situation, and it is necessary, if we are to continue the nobility of expression, to analyse the motive behind those perfectly composed and perfectly placed cities, with which we are all familiar.

If we do this we shall find that, while they are certainly the design of one uncompromising mind, yet they were also the result of collective effort of many crafts where all opposing individuality had been subordinated to the common design, and their magnificent effect is as much also the result of the silent cooperation of those who took no part as of the activities of those who did.

The city of the future, like the cathedral of the past, will be the handiwork of many architects, inspired by the one faith —it will be the ultimate work of art, its main structural lines or plan expressing its essential life and government, predetermined for the perfect whole to be achieved.

In this plan of the future city there is room for many artists, if each is working with the same end in view, and the faith that is required, or rather the knowledge is this, that the architect is the medium through which is expressed in material form the character of the civilisation of the day, and it is the architects' business to ensure that it reflects the best and not the worst elements.

RELATIONSHIP—OFFICIAL.

To the problem of City Development we have first to ascertain the relationship of the architect.

In the classic period of Greece and Rome civic architecture as such did not exist. The magnificent conceptions of monumental architecture consisted of groups of buildings on a colossal scale.

The birth of the architect in his relationship to the design of cities occurred during the period of the Renaissance, but at this stage he more particularly interpreted a royal or aristocratic inspiration, and while expressing the refinement of the few in no sense was it typical of the many.

It is only in comparatively recent years that the architect has been called upon to take his rightful place in the formulation of City Development. To America is almost due the credit for the vision which resulted in the general application of the art of architecture to cities as a whole.

It is now the general practice in all American cities which aspire to national eminence to place the development of their cities within the control of an Advisory Board or Commission, constituted primarily of three persons—a Town Planner, an Engineer, and an Architect, and sometimes with two additions, a Legal Adviser and a Sociologist.

The wisdom of this course is already apparent in the zoning regulations and similar ordinances, through observance of which the whole of the citizens cooperate to the common good of making their cities in every sense what they ought to be.

The evolution of cities has become so complex that this technical co-operation on the one hand and loyal acquiescence on the other are alone likely to produce cities which will in any wise be worthy records of the civilisation of the present day.

RELATIONSHIP—PERSONAL.

The relationship of architects officially engaged in City Development relates more particularly to monumental buildings or monumental effect, and undoubtedly he has great opportunity in consequence of the official authority.

But as to whether a city is really great, however, depends much more on the average practising architect; it is the work of their hands which collectively go to make up what a city really is.

It is in their standard of thought and work the future of the city lies, to the standard they are moulding the untrained imagination and primitive desires of their clients; and if they fail to hold the highest standard and so are unable to uplift their clients' view, or through some other limitation condone the expression of individual interest against the common good, then this selfish outlook will as surely be expressed in their buildings, and it follows collectively in their city.

This is, of course, an axiom fundamental to every activity constituting a city's being, whether it be professional, commercial, educational, or recreational; but in none of them is it quite so irreparable as in the work of the architect. In engineering it is not so apparent; commerce is more flexible, educational codes change, and recreations are passing, but the work of an architect is more materially lasting, and can be a tragedy as great as it can be a monument to virtue. Only to the extent an architect realises his responsibilities in this respect can he be truly said to be a worthy successor of those architects whose work in the past has raised the profession to its present eminence.

Their work consisted not so much of grandiloquent conceptions as of meticulous regard for detail. Appreciating that a building was beautiful to the extent that its details or units were beautiful, and so with a city, it is beautiful according as its details are the result of the highest thought.

The architect himself, continuously in opposition to the so-called practical man or the client with lack of funds, is inclined to make concessions and to be satisfied with compromise. Now it is an undeniable fact that justice is never achieved or served by compromise.

An architect must learn not to lose his nerve, not to be tainted by compromise, or he will degenerate into the production of little things. Those who rightly regard their profession as something more than mere business can do a great deal for a city, even within the limitations of their practice.

In showing his lantern slides during the lecture, Mr. Weekes stated that Civic Architecture might be considered in the following divisions:—(1) Business Premises, Streets; (2) Town Houses or the more formal residences of a City; (3) Simpler types of dwelling, cottages and artisans' dwellings; (4) The incidental features which go to make up civic architecture.

Someone has spoken of "The Colonnade as inherently vegetation in stone." It is fundamentally a conception of trees.

There was no doubt the day had gone by when Hyde Park, Sydney, could remain in its natural state like Centennial Park. The time has arrived when it should take on a form and character of its own. Being in the centre of a City, it should express the formality of City life; and that would be a much more worthy construction than anything in the nature of what it has been hitherto.

The Greenwich Hospital was originally intended by Charles II as a Royal Palace, but was afterwards given as a hospital by Queen Mary (William and Mary), who stipulated that its avenue should be 115 feet wide. The building is an excellent example of monumental grouping.

View of Old Cheapside shows that while there is a uniformity in the architecture of the old houses, there is also an individuality; no two houses are exactly alike. If we could only get the same rest out of our streets now, we should be better off.

The Japanese view gave the lecturer more than a little pleasure and inspiration. While each house or shop is individual, yet they have managed to achieve a very delightful continuity from which we have much to learn.

The view of the M.U.O.O.F. Hall and other buildings in Elizabeth Street was simply chaos from the point of view of civic architecture. The Hall was distinctive and characteristic, and standing alone, would always be worthy of a place in any city. The whole example instances what one might almost call wanton development.

In many parts of this City there are disagreeable gradients on the streets, small residential streets butting on to the principal thoroughfare. The view of the suburb of Alfredshof in Germany, showing steps, might be a solution.

There are rows and rows of houses in the suburbs of Sydney, and it is difficult to imagine how they could have been built in such monotonous rows, when they might have been grouped.

Instead of having advertisements stuck around, any City has the option of designing and introducing columns of the nature of the one shown in picture. There is no question of the superiority of this style over the vulgarity so often attendant on advertising.

Every architect is one of those many artists whose work goes to make up a City as a whole. It is not enough to merely regard the subject particularly in hand. His thoughts must go further afield and see its relationship to the whole. Everything which goes to make up the City is amenable to architectural treatment. If I have in any wise awakened an interest in that respect I am amply repaid.

MR. ANDERSON: I have much pleasure in moving a vote of thanks to Mr. Weekes. I have listened with a great deal of interest to Mr. Weekes' exposition of Civic Architecture. It just reminds me of something I read some years ago of a man who hunted through life for high ideals, and after spending the whole of his life in the quest, found them close beside him. While perhaps some of us have often thought of the "City

Beautiful" in our dreams, and we have pictured magnificent opportunities, and longed for the chance of remodelling perhaps even our beloved City of Sydney, we have to-night been brought to realise that after all we have had a finger in the pie, and we have been doing something to make or mar our ideal City. We may not have had an opportunity on a large scale, but we have been reminded to-night that everything we have done has its value from a civic point of view. Those of us who have had opportunities of travel and observation sometimes wonder whether there is not just a danger, however, in the formality of some of these Cities of the Old World growing somewhat monotonous. I remember one day looking along one of the boulevardes of Paris, and thinking that after all a few breaks in the skyline would have been an advantage. It is difficult to appreciate sometimes to their full extent the benefits which are due to formality. We are supposed to be expressing in our practice the natural characteristics of our country, and perhaps that illustration of Elizabeth Street is only an expression of our national characteristic. Unconsciously we have thrown off restraint, and we have broken out into a sort of lawlessness, which has been reflected in the buildings of our City. I should, however, like to make an apology for Sydney. I think Mr. Weekes' illustration was not quite fair. We are in a transition stage, and when the surrounding owners get just about as much money as the Oddfellows, they may get their buildings up to the same height. When we can get the owner of the next-door property and our clients to agree, then we may be able to get a more ideal City. I was struck with Mr. Weekes' statement that Hyde Park should be formal. That is rather a new idea to me. I have missed that avenue of fig trees which not the architect, but the engineer, destroyed in making the City Railway. One does miss, too, the great avenue of fig trees which used to extend down Macquarie Street. I fought very hard when I was Vice-President to retain those trees. In some respects one cannot help feeling sorry that we have somewhat ruthlessly destroyed some of the architectural beauty of even the "dirty Moreton Bay fig." We are deeply indebted to Mr. Weekes for reminding us once again that the making or marring of the beauty of our beloved City of Sydney rests in our own hands.

PROFESSOR WILKINSON: I think it a great honor to be called upon to second the vote of thanks to Mr. Weekes. I think it is a remarkable thing that we should have had one of the most interesting lectures we have listened to in recent years delivered by our City Surveyor. We should consider ourselves extremely lucky. Sydney is fortunate in having a man of the calibre of Mr. Weekes as City Surveyor. I only wish that the scope of his activities was not limited to the City boundaries. We are grateful to him for his delightful lecture. I think, as Britishers, we appreciate particularly the reference to Regent Street, London, which has practically disappeared. Now that it has gone architects are realising that it was a fine piece of architecture. An important thing to notice was that it was built of the cheapest and shoddiest materials, and yet they stood perfectly well for over a hundred years. Another point is the colour of the City's buildings. When we come to think of it, those Cities that please us most are generally those which have light-coloured buildings. In Scotland some of the Northern Cities are built of granite, and in Lancashire of red sandstone, and they have none of the charm and healthiness of buildings produced in a lighter material. The fact is also brought out that good, or rather, expensive materials, will never make architecture. It is the thought put into the form, appropriate to the function of the building, that tells. Often architecture is not primarily a matter of money. If "clothes make a man," costly materials do not make architecture.

MR. JACKSON: I have very much pleasure in supporting the vote of thanks. It has been a great treat to hear this lecture. I think it is a great advantage in this new and as yet undeveloped City of Sydney for us to have put before us Mr. Weekes' ideas, which are the result not only of the pictures shown, but of his own experience and deeds. These thoughts are very helpful to us, and enable us to take a broader and wider view of civic architecture.

MR. B. WATERHOUSE: I would like to add a few words in support of the vote of appreciation to Mr. Weekes. Mr. Weekes has filled us with an inspiration in regard to our work, and increased our hopefulness in regard to the future development of this great and growing City. In looking at the slides of the beautiful places he has shown, one was struck almost immediately by the thought, "How can we also achieve what has been done elsewhere?" I think the sooner we get down to bedrock in that direction, and begin to formulate some scheme whereby those things can be achieved, the better it will be for our City. It seems to me it depends upon three things—greater knowledge on the part of the architect, greater appreciation on the part of the public, and the development of a civic sense in the citizens which I am afraid at the present time we are sadly lacking. As to a greater knowledge on the part of the architects one is greatly encouraged by the improvement in individual work which has taken place in our street architecture during the last ten years. With increased training at the University and Technical College, and with travel abroad, I have no doubt we shall in the near future have architects who will produce work of as high a standard as any we have seen here to-night. Then it is still necessary to have an understanding and appreciative public, and a development of that civic sense, which after all is the basis of a great deal of the beautiful work done. In that direction, I feel it is regrettable that a lecture of this kind should not have been heard by the general public. I was struck with many of the slides showing colonnade buildings. It has always seemed to me that that was one feature which we could adopt in our architecture, but I am rather afraid there is a great deal of official objection. I feel that, with a little official sympathy, architects would have very little difficulty in getting their clients to adopt a method so beneficial not only to the individual building, but to the whole of the thoroughfare. Mr. Weekes' remarks in regard to Hyde Park did come as a welcome surprise. It must be evident that a large area such as this must be dealt with in a different way to what it has been in the past, and I hope Mr. Weekes' suggestion will be followed up. Although we may have the individual effort of the architect, appreciation of the client, interest and support of the citizens, we still want some body which will have authority. I do hope that in the near future there will be established an advisory committee, which will be able to deal with these matters at any rate in a consultative way, giving their professional advice as to how the objects we have in mind can best be achieved.

MR. NELSON: As a new member I should like to register my pleasure in listening to this lecture. I think Sydney is to be congratulated upon having an officer with vision rather than one who is absorbed in the details of his office. I must join issue with him in regard to his admiration for American work. I do not think they are marvellous town planners. One has only to look at old cities like Venice, where everything is grouped with a proper appreciation of the surroundings. There are great outstanding minds which influence most of the work in America, the general effect being a restlessness quite equal to that of Sydney. We all hope that Sydney will be the City of our dreams. If only architects and those responsible for beautification of design co-operate with the authorities, no doubt it will become so.

MR. MOULD: Nothing but good can come of the study of the architecture of the past. There is no doubt about it the examples which have been put upon the screen to-night give us a feeling of hope that our City will in time become one of the first Cities in the world. The lecturer crystallised the subject very aptly when he referred to the fact that our great Cathedrals were the result of various architects working from one common faith. Taking that as a basis, for after all the basis of all good work must necessarily be metaphysical, if we are going to get good results we must of necessity have well-trained men, imbued with the finest ideals, to produce something worthy of the place where they live. Only from those results can we hope to expect anything great in the future. With regard to town planning generally there is a danger that left freely in the hands of limited sections, the results are too much alike. It is absolutely essential that we should have first, a general central control, and then a reasonable standard of the individual architect, so that the co-operation of the two will produce the best results. Sydney is in a transition period, and it is a good thing to see the direction in which we are moving. If we are to look forward to a better Sydney it is just simply by raising the standard of architecture on the one hand, and getting a proper control on the other hand. The lecture has been an excellent one, and is bound to be stimulative to everyone who has heard it.

MR. J. PAYNE: I have much pleasure in being present here to-night. As a member of the secondary profession of Engineering, I have noticed on the Continent the results obtained by the proper combination of the efforts of the Engineer and the Architect. Considering a large number of our more or less utilitarian necessities of to-day, such as the Electric Railway, we must admit that some of the structures perpetrated in England and America can hardly be called beautiful. In the North of Italy and in Switzerland the Railways give quite the opposite effect. I often studied the North Italian Railways to try and see what produced that effect, but I could not get it. There is some touch that the Central European nations are able to produce which is not produced in other parts of the world. The Americans have not that artistic touch which makes all the difference. I think any efforts we hope to make in the future will be considerably helped by a combination of the engineer and architect.

SIR CHARLES ROSENTHAL: I think the fact that so many members and visitors have been induced to speak to-night is the best compliment we could pay to Mr. Weekes. There are two or three points that I wish just to refer to. One cannot help looking back to a few years ago when we were subjected to a plague epidemic, and our

State Government took in hand the resumption of certain areas, with a view primarily to clean up the City. The Rocks area is one of the most important in this City. What happened? Simply because those in authority were lamentably short of vision, the old Rocks slum area has been more or less perpetuated. Only to-day we were urging the Government to hand this over to the City Council, even if that authority was not altogether a good one. A golden opportunity was lost in connection with the Rocks, because of lack of vision. Mr. Weekes referred to the proposal to do something in connection with Anzac Parade. There again we want vision. You will realise the point, that the main outlet to the South Coast must be by Anzac Parade, and not through tortuous Newtown. I hope when Mr. Weekes does his replanning there will be a golden opportunity of continuing Anzac Parade through to the entrance of Cook's River and Botany Bay, thereby making that the outlet of the South Coast along virgin country which gives magnificent panoramic views. I hope also that he will not slaughter the fig trees. I quite agree with Mr. Anderson regarding Macquarie Street. Still, when you see it as it is now, you realise that those who recommended the change perhaps had some vision too. We have only two avenues, one in the Domain and the other in Anzac Parade; and I do hope, whatever designers may feel, they may apply their activities elsewhere rather than destroy the only two remaining avenues we have, particularly the one in the Domain which was planted over a hundred years ago. There is ample room for colonnading. There are one or two exponents of it in the City Council. In the near future we will see that colonnading will be carried out for the ultimate good of the owner of the building concerned and of the City itself. I would like to add my personal pleasure and gratification to what has been said regarding Mr. Weekes' address; and I hope it will be one of many others.

MR. WEEKES: Gentlemen, I thank you particularly for the warm-hearted expressions of your thanks. Ruskin said "There is indeed a charm and sacredness in street architecture, which must be wanting in even that of the temple. It is a little thing for men to unite in a religious service, but it is much more for them to unite like true brothers in the arts and offices of their daily lives." Much as we desire that perfect ideal City, and much as we may deplore the attitude of officialdom towards it, we have in our own hands very largely the shaping of the City. Before anything is created it must be formed in thought, and just as each individual does his little part, so will our contribution to the end we have in view. There is nothing above the plane of the earth which has not some architectural value and which needs to be regarded as a contributory. Referring to colonnades, if nothing else demands it in Sydney, the traffic requirements demand colonnades, not as encroaching on the streets, which are narrow enough. We want arterial routes and open spaces.

Woodcut by T. V. Gulliver, N. Z.

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ORDINARY GENERAL MEETING
2nd JUNE, 1924

PRESIDENTIAL ADDRESS

followed by a Paper on

POSSIBLE FUTURE CITY DEVELOPMENTS

By SIR CHARLES ROSENTHAL
K.C.B., C.M.G., D.S.O., F.R.I.B.A.

SIR CHARLES ROSENTHAL (President): Before touching on our business this evening I would remind you that during the last few days one of our members, Mr. Lake, has passed to the Great Beyond. Many of us knew him slightly, and some of us for a lengthy period, but all who did know him feel that in Mr. Lake we certainly had one who always upheld the dignity and ethics of the profession, and who was a gentleman to his finger-tips. I would like to extend to his relatives, and to his partner, Mr. Waterhouse, our sincere sympathy; and if you acquiesce in that I think we might just stand for a moment in recognition of our esteem for Mr. Lake, and as an indication of the sympathy I know we all feel.

The minutes of the Ordinary Meeting held on 13th May were read and confirmed.

Apologies for non-attendance were received from Mr. McCredie, Mr. Gardiner-Garden, Mr. Hughes, and Mr. Sydney-Jones.

THE PRESIDENT: Under the heading of Notices, reference is made to the Annual Dinner. Our Council discussed the proposal this afternoon. Last year we had a very successful function. The Council thought that a charge of 30s. should be made for the tickets. You will understand that that covers a number of guests whom we wish to invite. The Council decided that the same conditions should prevail as before, and that the tickets would be the same price, 30s. The Governor, Sir Dudley de Chair, will be with us that evening. Members are not only privileged, but invited to bring their friends. The toast list will be as before, the King and the Governor taking, of course, first place. Then Parliament will be proposed, thus giving Mr. Bruntnell, who represents the Government side of our Architectural World, in so far as it controls the Registration Board, an opportunity of saying something of interest. The Governor will propose the toast of the Institute of Architects, and kindred societies will be represented and accorded a toast. We think that the interchange of relationship, both social and professional, among various bodies is for the good of us all. I would like to stress the point that members ought to look on this not merely as a social function, but as a duty.

Mr. England lately referred to the liability of a client in the event of failure by builder to pay wages, and some of our members have already made provision in their certificates for a clause which protects the client. Our Council decided the matter should be referred to the Institute's Solicitor, Mr. E. P. Simpson, and I personally interviewed him, and laid the case before him, and he wrote advising us that the following receipt clears us from all responsibility:—

> *"Received from .... the sum of .... in accordance with attached Certificate No. ...., and I/we hereby state that all wages in respect of works covered by this Certificate have been duly paid.*
>
> *................ Builder."*

It would be well if members would remember this opinion, and try as far as possible to adopt the form of certificate which Mr. Simpson recommends.

The Master Builders recently invited us to attend a demonstration at Marrickville, where they are training bricklayers and plasterers. There is very great difficulty in getting qualified tradesmen, and the Master Builders have realised that, and also the grave injustice meted out to a number of young men who went to the war when they were just old enough to go, and had not the opportunity of learning a trade before they went. When they came back they found the law said that they could not be apprenticed because they were over the age of 16. The Master Builders have been doing a good work, and it is an education to see what is being done. If you happen to be at Marrickville they will be very pleased if you will visit their establishment. The instructors will show you round, and the students themselves will appreciate your interest, and the few words of commendation which I am sure would be spoken. Anything we can do to help the scheme on should be readily done. I think thirteen weeks was the time in which they were turned out.

PRESIDENTIAL ADDRESS

GENTLEMEN,

You, as members of the Institute of Architects of New South Wales, have seen fit to elect me as your President for a second term of office—an honour which I most deeply appreciate—and it therefore becomes my duty to-night to thrust upon you a Presidential address. I promise that it shall be brief.

On such an occasion as the present it is fitting that we should look back along the traversed road of last year, as well as forward to the journey which lies ahead. We look back in order that we may note our achievements and take to heart lessons from our failures. In looking forward, we are encouraged by the good work done in the past, and very materially helped by the experiences gained from our mistakes.

A review of the Institute's work during the past year should be of interest. First of all, our membership has been maintained, though there are still many practising architects in the State who have not thrown their lot in with us. A special effort is now being made in the direction of gaining added strength to the Institute Fellowship from the ranks of qualified Associates, and to bring in all practitioners not now members, who are eligible for either Fellowship or Associateship. It is also confidently hoped that during this year a way may be found to bring about closer relations (if not actually an amalgamation) between the Institute of Architects and the Architectural Association. If effort in the above-mentioned matters is as successful as is anticipated, our Institute will undoubtedly make marked progress during the current year. We hope to continue our official Institute visits to the various industrial and developmental concerns in the State. As architects it is our duty to keep ourselves well in touch with everything that affects our own profession, and to do this we must not be parochial, but take the fullest possible interest in all manufacturing and industrial concerns. It may be said that a visit to a coal mine has no direct bearing on Architecture—perhaps not; yet industries which are closely allied to our work are dependent on the output from our mines for their fuel—and could not function without it. A visit to the various dams associated with the Sydney water supply may perhaps not be attractive to some architects; but our City life as we know it to-day is only made possible because of such supply. The new irrigation works above Albury being undertaken jointly by the Governments of the States concerned at a cost of several millions sterling, give to the visitor some conception of the possibilities of settlement in New South Wales, Victoria, and South Australia. Population means work to the architect; therefore I feel a visit to the Mitta and Murray is one that our members should readily approve. The works of the Gas Company at Mortlake, the Power Houses of the City Council and the Railway Commissioners, and the activities of the Harbour Trust are mentioned as suggestive of other visits which could not help but be instructive as well as most interesting.

One of our seaport towns is on the eve of great development. I refer to Port Kembla. Some of our members recently visited the industrial concerns in this town, and I feel sure all were impressed with the urgent necessity for a proper town-planning scheme for Port Kembla. If undertaken at once before further industries are established, a golden opportunity presents itself to lay out an industrial town on the most approved lines. The matter has been referred to the Minister for Local Government, and will, in the near future, be the subject of a deputation from this Institute to the responsible Minister.

It was hoped that during last year the new City Council Bill would have passed both Houses of Parliament—in which case it would have been in operation to-day. The Bill was crowded out of the last Session, but the Premier has given a definite assurance that it will be one of the first measures introduced after Parliament re-assembles on July 1st.

Efforts have been made in the direction of securing to Hospital Committees the right to appoint their own architects for any Hospital work undertaken. A deputation from this Institute is to wait on the Minister for Works to-morrow morning, and I hope its efforts will be successful. It may interest members to know that in Victoria no Hospital work is undertaken by the Government Departments.

The recent request from our Institute to the City Council concerning the necessity for a competition to be held in connection with the re-establishment of Hyde Park has been accepted by the Council, and at last meeting of the City Council was formally agreed to. The Architectural Association also assisted us in the representations made. The acknowledged recognition from the City Council and from outlying municipal bodies clearly indicates the admitted status of our Institute, and the value it may be to the community generally. Many local governing bodies have requested us to prepare Conditions of Competition for building Memorials, lay-out of parks, etc., and the assessors recommended by the Institute have always been appointed, and their work much appreciated.

Several of our members have obtained the assistance of the Institute in adjusting differences between architect and proprietor, and architect and builder; and frequently advice is sought by outside people. The Council is only too pleased to do all in its power to maintain and improve the correct relationship between its members and the public generally.

I wish to-night to specially refer to the excellent scheme of training now in active operation at Alexandria under the guidance of a Committee from the Master Builders' Association. Young men are taught bricklaying and plastering in a most thorough manner in a 13-weeks' course, with most excellent results. We, as architects, naturally are materially helped by the turning out of qualified tradesmen, and I would urge all our members, as opportunity offers, to pay a visit to these classes. I certainly wish to tender to the Master Builders' Association and its energetic Committee our whole-hearted congratulations.

Dare I, without being accused of introducing political matter, make a suggestion concerning our forthcoming Sydney Municipal elections in December next, and our State elections, which will presumably be held early next year? In the control of the affairs of this City, architects could be of the greatest assistance. Their theoretical and practical training specially fits them for aldermanic work, and applies equally truly in the larger sphere of State politics. In the City Council we have at present two architects, and in the State Parliament we have one. I do hope some of our members will hear the call of duty to both Municipal and State activities, and make their services available when the time comes. We must not forget that architects can only do well when our country is prosperous; and the right men in our Municipal and State life will do much to ensure prosperity along sound and practical lines.

I now focus your attention on three outoutstanding proposals, with which the future of our City is very definitely concerned. I hope you will remember that the opinions I shall put forward are my own entirely, and many here may disagree with them. At all events, if my proposals have enough merit in them to cause our members to personally look into the schemes and give us all the value of their criticism, constructive as well as destructive, we may impel the responsible bodies to seize the golden opportunities now to their hands.

The first has reference to the area known as Woolloomooloo, the second to The Rocks area, and the third to our main roads leading from the heart of the City to the North, to the West, to the South, and to the South Coast.

I will first deal with the Woolloomooloo area—a natural depression with high ground on three sides and the Harbour on the fourth side. The area I refer to may be considered as being bounded on the South by William-street, on the East by Victoria-street, on the West by the Domain, and on the North by Woolloomooloo Bay. Within these boundaries generally we find a poor class of building —a few comparatively new business premises, many poor hotel buildings, and a large number of dwelling houses.

In my opinion the time has arrived when the whole of this area should be resumed and dealt with on a big broad basis. William-street has recently been widened, but while this widening was in progress a re-grading of the street should have been undertaken as from Hyde Park to King's Cross, the cross streets being continued under the raised roadway. This would have given a fine outlet to the Eastern Suburbs, and, indeed, would undoubtedly have ensured William-street becoming one of our best business streets.

High Holborn in London is an illustration of such a treatment. Most of the resumed area has now been sold by the City Council and built upon, but it is not yet too late to deal adequately with William-street.

In the Woolloomooloo area provision could be made for the buildings associated with our Municipal, State and Federal activities. Backing on to the William-street frontages, our City Council buildings could be placed; on the Victoria-street frontages our Federal buildings; and on the Domain side our State buildings—the centre of the area to be devoted to park and garden. Wharves and buildings, the property of the Harbour Trust, should be removed, and Woolloomooloo Bay foreshores improved in harmony with the general scheme. It is difficult to comprehend why the Harbour Trust Commissioners ever provided wharfing facilities at this part of our Harbour. Haulage from the wharves is difficult because of grades; no rail is provided, and cannot conveniently be arranged for unless by tunnelling from Darling Harbour rail system, and in any case this is an area of water and foreshore which should not be commercialised.

We are all aware of the inconvenience occasioned to those who have much to do with State and Federal offices. They are scattered all over the City in the most haphazard way. They should be concentrated in a suitable locality, and Woolloomooloo area suggests itself as one being capable of the treatment necessary to that end.

I hope in the near future to bring before the Institute a carefully worked out plan embodying the foregoing suggestion with details of cost, etc.

THE ROCKS AREA.

It may be remembered that about the year 1901 Sydney suffered from a bubonic plague epidemic, and the Government of the day resumed the buildings in a certain area because of their dilapidated and insanitary conditions, and in order that the district concerned might be replanned. I understand about £1,000,000 was involved in the necessary resumptions. As a direct result, George-street, adjoining Circular Quay, was widened, and in the process many slum dwellings were demolished. Other improvements have been made by the Housing Board in this area, but it must be admitted that no adequate scheme of replanning has been laid down, though The Rocks area embraces most commanding land.

The North Shore Bridge has now been finally approved and work commenced. Dr. Bradfield has planned the necessary approaches to the Bridge from the City, and the time is opportune for a comprehensive scheme embracing the whole of The Rocks area. When the amended City Council Bill has passed Parliament, the City Council will have the power to re-align without immediate resumptions, which power is already possessed by all Local Government bodies.

Further, it seems unsound that there should exist within City Council jurisdiction another governing body dealing with town planning matters. Much better that the City Council should take over the functions of the Housing Board in this area, and thus become the sole governing body in the City.

MAIN ROADS IN RELATION TO THE CITY OF SYDNEY.

Sydney needs adequate outlets to the North, the West, the South, and the South Coast districts of the State. Does she possess them to-day?

On the North the road leads over the Hawkesbury at Wiseman's Ferry, then on through Wollombi to Maitland, and thence to North and North Coast districts. Newcastle is at present not on a main route. On the West the outlet is along the Parramatta-road—certainly much improved of late years, but still hardly capable of carrying the normal business traffic of the City and Western Suburbs, let alone providing for the expansion expected during the next 50 years. This road, together with the Liverpool-road, provides for traffic southwards through Goulburn to Albury and Victoria.

The South Coast outlet is through Newtown and St. Peters—a narrow congested roadway totally unfitted for the traffic it has to carry. Between Newtown and Cook's River widening proposals are in contemplation.

None of the highways referred to are capable of dealing with the traffic; not one is beautiful; not one has good road surface. If these statements apply to-day, what of 50 years hence? Here follow my suggestions:—

Main Northern Road
should leave Sydney *via* the North Shore Bridge, traverse the almost virgin country between Chatswood and Hornsby; thence to Peat's Ferry on the Hawkesbury, crossing the Mangrove Mountains; thence *via* Gosford to Newcastle, the North, and the North Coast. This route to Newcastle is easy of construction, opens up magnificent scenery and fruit growing area, shortens the distance to Newcastle by something like 60 miles, and incidentally would have great military value.

Main Western Road
should also leave Sydney *via* the North Shore Bridge, and for part of the distance be identical with the Main Northern Road, crossing the upper reaches of Middle Harbour, thence along the high land *via* Eastwood and Dundas, junctioning the present Western Road beyond Toongabbie. This roadway, too, would open up the most delightful residential districts, and the views along the route are very beautiful. Perhaps this road as far as Toongabbie might also be the main outlet to the Southern Tableland connecting across to the existing road at Liverpool.

Main South Coast Road
should leave Sydney *via* Anzac Parade, thence across almost virgin country to the mouth of Cook's River (where a bridge is about to be built), and junctioning with General Holmes' drive, Sans Souci, and Tom Ugly's Point, where the new bridge is to be built.

Here, again, engineering problems are conspicuous by their absence, while the views generally along this route are charming, indeed.

St. Kilda Road, in Melbourne, is a splendid example of what vision and enterprise can do in the way of building main highways. I recall when this road was re-designed about 24 years ago and planted. To-day Melbourne has perhaps the finest road in the world of its kind, and our Melbourne friends are extending this type of road in other directions. Similar results could come to us here if our governing bodies will only look ahead, and if public opinion assists.

Imagine journeying from Melbourne to Sydney *via* the Prince's Highway and the South Coast, a route becoming increasingly popular, and from it entering Sydney through our existing entry at Cook's River; similarly from our Western and Northern roads!

If the routes I have suggested are at once provided for, designed and planted, I feel sure the people of the State will be appreciative and give credit where credit is due. The late Sir Henry Parkes may be remembered by some because of his work as a Legislator, but the great bulk of our people will revere his memory because of his provision of adequate parks for the future of our City. The great National Park on the South, Kuringai Chase on the North—each of over 33,000 acres—taken together with Centennial Park, form an everlasting monument to the wisdom and vision of Sir Henry Parkes.

Is it too much to hope that in these days we may look for some far-seeing Minister to safeguard the interests of our future citizens as regards highways in the same way as Sir Henry Parkes did with our parks? The time to act is *now.*

ADDITIONAL EXTRACTS FROM ADDRESS

We have reached a stage when the Architects' Registration Board has decided to say who shall and who shall not be practising Architects in New South Wales. Among those who will be and are being registered are some who, under our Constitution as at present laid down, could not perhaps come in as members. I think our Council feels that something will need to be done in the way of amending our Constitution so as to admit men who are recognised by the Board of Architects as qualified. In every new system there must of necessity be a starting point, which perhaps to some of us is not quite satisfactory. The same applies to the Veterinary Surgeons Act which was recently passed. At the outset some will be admitted who are perilously close to the border line for qualification, but there must be a beginning, and now that our Architects are being weighed in the balances, and the Board is deciding whether or not they shall practise, we feel that something should be done to bring in all those who are to be practising Architects.

If you go into the City Council Power House you will see machinery manufactured in Australia, which probably most of us never imagined could be built here.

Those of our members who recently visited Port Kembla may think that the artificial harbour which is being constructed looks comparatively small, but when the area is referred to, it is seen that the harbour as we now have it can accommodate a big fleet of mercantile ships. Then there is a proposal to further extend, and make an inland harbour. Mr. Kelso King told me he would welcome the erection of many workmen's dwellings in Kembla. Messrs. Hoskins, of Lithgow, have bought largely and contemplate erecting works there. Everything points to Port Kembla being one of the most important industrial centres in New South Wales. The original Government survey is an example of what ought not to be done. Admittedly it was carried out many years ago, when there was no thought of what the future might hold. But now we know what is to come, and now is the time to do what is best in regard to a town-planning scheme.

There are many things connected with the old City Council Bill which urgently require readjustment. One of the most important powers which will be conferred on the City Council, at present held by other bodies, is that of realignment.

In Victoria the Government is compelled by law to contribute one half of the cost of all buildings appropriated or used for the treatment of infectious diseases, and they also contribute to other hospitals, but in no case is the hospital work undertaken by Government Departments.

Our Institute asked that it might be allowed to help the Government in the reconditioning of Wentworth House, and Professor Wilkinson and Mr. Day have been associated with this work, and the Government has agreed to find the necessary money, and let our members carry it out. The work is being done gratuitously. The Government is now beginning to realise that outside men may be able to do better than their own officers. Every year some of our members go over to the other side of the world, to America and Europe, partly with the idea of taking a holiday, but also with the desire to come back more fully equipped with new ideas to carry on their work here. Mr. Budden has gone to America to study the latest development in commercial architecture for Messrs. David Jones. There is no encouragement or inducement for our architects to go abroad and study hospital work when they know they will never have a chance of carrying out that work when they come back. One feels that the knowledge of members who have travelled must be more advantageous to the community as a whole than that of officers of the Public Works Department who perhaps never have a chance to go abroad, and get the whole of their knowledge from other people, or books.

It does not mean that the only man who can tackle Parliamentary work is the independent man. Parliament is just as much a hobby as golf or horse-racing, which perhaps costs a good deal before the end of the year comes round, and with very little to show for it.

One of the anomalies of our City Council control is that while the Council has power to order the demolition of insanitary buildings, it has no power to order the landlord to re-erect. Very often tenants say, "Oh, do not pull down the laundry or the bathroom; the landlord will not give us any more."

At the time when the Rocks area was resumed the City Council was a dormant body, and was not alive to its responsibilities or the opportunities which that area gave them. Otherwise, we should to-day, 23 years afterwards, have had something to show as a result; but we have nothing, and it is only because of the North Shore Bridge proposal that something is now being attempted to remodel the area, and not by the Housing Board, but by the Railway Commissioners and the City Council—bodies which are not the best to undertake this class of work. If an adequate Board had been appointed free from Government control, something like the Metropolitan Board of Works in Melbourne, we might to-day have seen the Rocks area a locality of which we could very well be proud. The Observatory stands there, and many of our prominent buildings could have been erected there. The Rocks area should have been made the most commanding feature in our City sky-line. Nothing has been done in the way of re-designing our streets because a definite comprehensive scheme was not tackled at the outset. What we must do is to plan not only for to-day. but for the future. No public man should look less than 50 years ahead. The Rocks area is like Topsy. "It growed." If the City Council wishes to resume or improve any area it has to take it over within a very limited time, pay for it, and then commence operations. As you know, arriving at a decision to resume an important section is no small responsibility; aldermen have varying opinions and ideas, and it takes sometimes months to finalise the matter; no end of changes take place, prices are boosted up, and it often finds it has to pay through the nose. There are many instances where resumptions are carried out in part only. Wentworth Avenue was carried right through; it was a finished job. Various resumptions at Darling Harbour are only partially carried out. If we want to resume anything therefore in continuation, we have to pay not only the current value, but the increased value due to the improvements we have carried out ourselves.

MR. ANDERSON: It devolves upon me in my official capacity as Vice-President to propose a vote of thanks to Sir Charles for his address. He has carried some of us right off our feet with his views of improvements, which are not confined to the City, but swing right away north, south and west, including new arterial routes. One begins to wonder where the architect is going to stop. As we have listened to the schemes which Sir Charles has propounded to us, we wonder what the future of this State is going to be. He has asked for some criticism. Regarding his route for the North, I do not quite see that dipping down into that valley between the North Shore Line on the one side and the Strathfield-Hornsby Line on the other is quite the best plan. I should prefer if the new proposed road followed what, to my mind, is one of the most cleverly laid out roads around Sydney—the Lane Cove Road. I do not think the views from there can be surpassed anywhere.

In regard to Woolloomooloo I do not think we can blame the Harbour Trust for putting the wharves there, as it was done many years before that body came into existence. That Trust was created as a result of the outbreak of bubonic plague, when the City had got into a disgraceful condition. I have in my office a collection of photographs taken of the plague area when the cleaning up was done.

The scheme to make Woolloomooloo Bay a civic centre is so daring that one simply gasps and wants to just look round and take his bearings, but really the idea is magnificent. The wharves there are hideous. They spoil the view from the Domain altogether. We have to remember, however, that we are not only the advocates of beauty, but we are a great seaport, and we have need of every inch of our available water frontages. I am afraid that as a great seaport we cannot afford to give up the Bay. When the City Railway is completed it would not be a very difficult thing to connect the Railway with Woolloomooloo Bay. The Government lost a good opportunity many years ago, when the Pastoral Finance Company built its wool store. The railway was very close

SELECTION OF SLIDES
SHOWN DURING SIR CHARLES ROSENTHAL'S ADDRESS

A near view of the entrance to Anzac Parade, the suggested outlet to the South Coast.

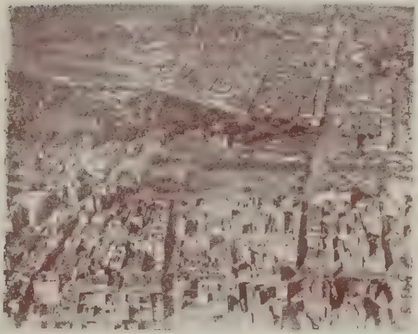
Entrance to Anzac Parade from City—Suggested outlet to South Coast.

Dawes Point—showing position from which North Shore Bridge will spring.

Cooks River Road, St. Peters—Present main outlet to South Coast.

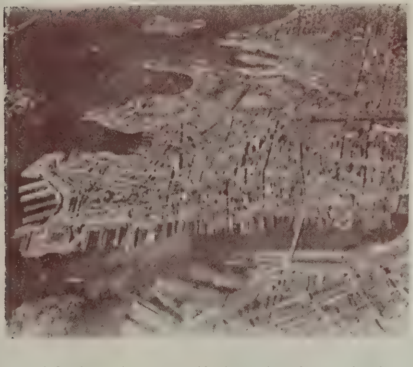
Old House, Woolloomooloo area.

A view of Woolloomooloo in the early days.

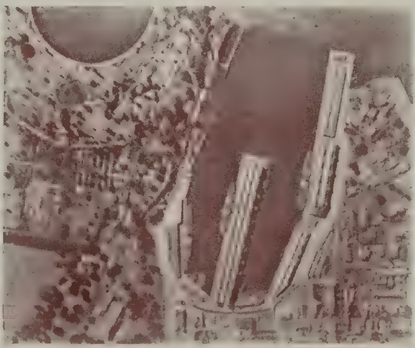


Aerial view showing the Domain, Woolloomooloo and Woolloomooloo Bay.

Dwelling in Woolloomooloo area.

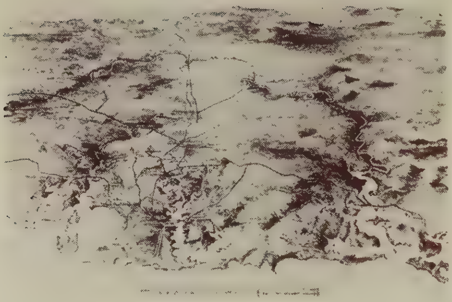


Aerial view of Sydney Harbour foreshore, showing Woolloomooloo Bay, and Woolloomooloo area suggested to be resumed and remodelled.

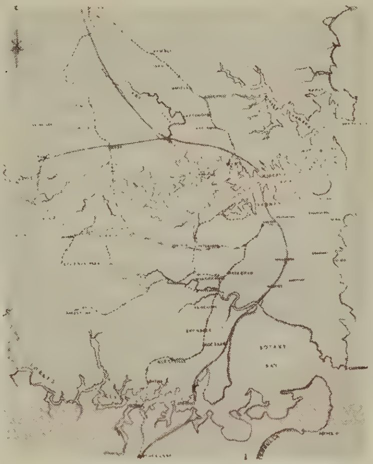


Aerial view of Woolloomooloo Bay from which it is suggested wharves should be removed.

SELECTION OF SLIDES
SHOWN DURING SIR CHARLES ROSENTHAL'S ADDRESS



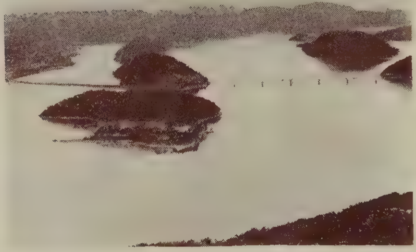
Bird's eye view of country from Sydney Westward to Parramatta. (By courtesy of Dr. Bradfield).



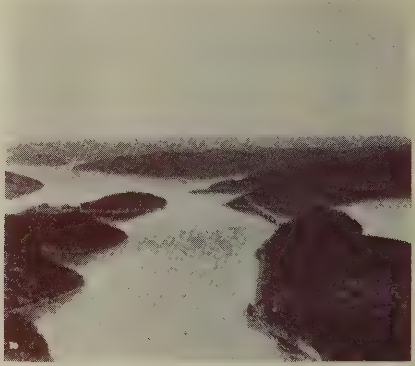
Plan showing suggested new Northern, Western and Southern Road outlets from the City.

Filling in of part of Darling Harbour.

William Street as widened.

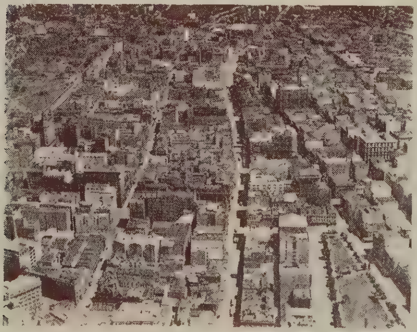


Aerial view of Hawkesbury looking Westward, showing location of Peat's Ferry crossing.

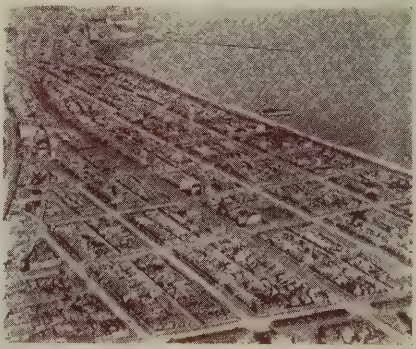


General aerial view of Hawkesbury River and adjoining country traversed by proposed Northern Road Crossing at Peat's Ferry.

COMPARISON OF LAY-OUT OF SYDNEY AND MELBOURNE.



Sydney.



Melbourne.

to that, and that wool store should have been connected with the railway. and the latter run right round the foreshores, instead of thousands of pounds being spent in going up into the shallow waters of Blackwattle Bay and Johnstone's Bay. We lost our opportunity of utilising the water frontages of the North side, when the Railway was not continued round on to the side of the Pastoral Finance Company.

The Rocks and Woolloomooloo are problems which every City has to face. Last night I went to a Sunday School held in Surry Hills, where there were about 120 youngsters from 8 to 14 years old, gathered up out of a slum area. A clergyman said to me, "Really, it seems as if they are damned before they are born." You do wonder what chance the kiddies have got, the street for a playground, and not a clean one at that. We boast of our glorious Australia, we talk of the advantages we have to offer, and we are appealing for immigrants, yet we have these plague spots, which are worse than any bubonic plague ever was.

I think we owe a debt to Sir Charles for drawing our attention to the possibility not only of cleaning up but of beautifying these infectious areas. We are to be congratulated upon having at our head a man with such wide vision and experience.

PROFESSOR WILKINSON: I have great pleasure in seconding the vote of thanks to Sir Charles Rosenthal. The address has been something more than an ordinary one. Sir Charles invited us to criticise his ideas. I am going to suggest that there is something in them.

One of the planks of the present year's work of the Institute is the proposed combining of this Institute and the Architects' Association. We hope these two parties will be brought together as one, which will cause their views to have more weight with the public and the powers that be, and enable them to do very much greater service.

I am particularly interested in the main roads proposed. When you take visitors and friends for motor drives about Sydney the gilt is taken off the day's run to some extent by having to come back through all those mean streets just on the borders of the City. The last half hour is very unpleasant and spoils what has otherwise been a delightful day. I would like these proposals to be put before the Sydney Regional Plan Convention. This Institute is represented on that body, and the two should be able to co-ordinate in something definite. The road to Tom Ugly's Point seems an excellent suggestion. We are far too much inclined to widen our existing roads rather than open up new ones, which could be done more economically and give greater convenience, to say nothing of opening up new country.

MR. SCOTT: Sir Charles has given us a big order to criticise his work, because he has gone into it much more fully than we have. I feel that we have a particularly hard-working President, and with the exception of myself, a hard-working Council, whose work has borne good fruit. It is clear that we did quite right in electing Sir Charles as President for another year. I was glad to hear him say that it is inadvisable to follow the lines of the old streets. The widening of Oxford Street was one of the biggest mistakes we have made. In my opinion another street should have been formed from the corner of the Park along Green's Road down Campbell Road and joining Elizabeth Street at the bottom of the Park. This would have cost a lot less money, and would not have destroyed Oxford Street as a business retail street. It is essential to have retail streets, and that is not possible where the streets are wide. Notice how we crowd into King Street, where the values are greater than anywhere else in Sydney. They are thinking of replanning portion of Adelaide now, with a view to taking in the lanes to form new retail streets. William Street is a poor one now, but if they had taken the top off the hill it would have been much better.

As to the Rocks, the less said about the efforts of the various Boards which have had control the better. I think, with few exceptions, the area is not much better than as I knew it 40 years ago, and certainly less picturesque. The flat-fronted terraces of flats are simply horrible, and the interior is even worse; they are miserable looking places.

The present Southern road out from the City through St. Peters is disgraceful. The idea of realignment of the streets when resumptions are made has always appealed to me. We will never have a good city by these partial resumptions. The trouble is the man who owns the land wants to reap the benefit of other men's labours. There is a want of patriotism and civic pride, and there is a greediness for the dollars. I have to congratulate the President on his fine address.

MR. MOULD: I wish to express my appreciation of the fine address we have had delivered to us this evening. We have been told "we should hitch our waggon to a star." To have two such areas as Woolloomooloo and the Rocks adjacent to our City is a disgrace, and it seems as if they should immediately be placed in the category of being resumed at once. Whether laid out precisely in the way suggested by our President is another matter. The point is that they should be resumed.

One of the outstanding difficulties we have round Sydney is our roadways. When you come into the City you almost feel as if you are coming into slums. Adelaide was originally laid out as a model City, but recent developments have been so great and so far beyond the anticipations of the original town planners that now Adelaide is referred to as a want of foresight. When we think of Canberra the general idea is to lay it out on a large scale, but it is a mistake to plan a City on too large a scale. The plan should be reasonably elastic, and at the same time leave room for the possibility of future extension. That is what our President is doing. Do not say our City is spoilt, or regret what has happened in the past. The time is now, and the circumstances are ready for us to take advantage of them. The question of importance is whether these things can be developed, and if they can be put into some concrete form. Let us not look upon them as dreams, but rather consider them as normal ideas.

MR. HARRIS: I congratulate our President. There are few of us who are not vitally concerned with the future of our City. I think it is impossible to look at this subject in too big or too broad a light. Sir Charles has put before us some things which are evident to all of us, but the trouble in the past has been not knowing where to begin. The President alluded to the Government, the City Council, and other authorities. That is where our biggest trouble comes in. There are so many authorities, and all have been working with the best intentions along their own lines. The Harbour Trust, when funds are available, does the best it can. We know the colossal expense that had to be incurred at Darling Harbour to take that serpentine Railway round the City. This great desire to improve conditions has been with us a long time, but unfortunately our efforts have been more or less spasmodic. Individuals have done their best. It was with the idea of co-ordinating the various ideas in the different Departments that a few members of this Institute, the Town Planning Association and the Institution of Engineers got together to try and form the Sydney Regional Plan. The only way we can hope to have a definite plan of the City is to look at it as a whole. Main arterial roads must be considered, and definite places must be planned for factory and residential sites and playgrounds. We must look at the subject in a very broad way. We cannot isolate the centre of the City from the main roads which come into it.

Thanks were tendered by the President of the Master Builders' Association and the Surveyors' Association.

Woodcut by T.V. Gulliver, N. Z.

THE INSTITUTE OF ARCHITECTS
ANNUAL DINNER

HOTEL AUSTRALIA, 20th JUNE 1924

ADDRESSES

1*st Toast—"THE KING"*, proposed by Sir Charles Rosenthal.

SIR CHARLES ROSENTHAL (President):

I am sure that the members of the Institute present here to night, those representing kindred Societies, and others who are here as our guests, will join me in extending a most cordial welcome to His Excellency the Governor of New South Wales on this the first occasion on which he has been able to attend the Annual Dinner of the Institute of Architects. You will recall that last year we were privileged to have the Governor-General with us. This year our State Governor is our chief guest, and we are all delighted to have him with us. I did say at our Architects' Exhibition a little while ago, a function at which His Excellency was present, that there was one feature about his appointment which gave pleasure to all of us, and that was that he was a Service man, and I think I may repeat that statement to-night. It is gratifying to us all in these Dominions to find that when our responsible heads are being appointed to the various States, loyal men who have served their country well and truly in the last few years of stress have been selected, and the fact that they have so served makes them infinitely more acceptable than they otherwise would have been.

Our State Governor has had a distinguished naval career. After he has served his term here as State Governor, I am sure he will go back to the other parts of the Empire, and take up just as distinguished work in other spheres. At our last Dinner I mentioned that I hoped when His Excellency the Governor-General returned to England, he would be a good representative for Australia in the Courts of the Empire at home. The Governor rather took me up by saying that he had no intention of going back yet awhile. I hope that our present State Governor will be with us here for many years. One of the great advantages of having Imperial representatives is the value, not only to Australia, but to the Empire when they go back. It must mean a great deal to responsible public men in England to be able to call to their assistance in various difficult times of stress and tribulation, distinguished men who have been through the different parts of our Dominions, and who can give first-hand information concerning the far-flung parts of the Empire. We recall the immediate predecessor to our present Governor-General, Viscount Novar. We remember him because of his interest in forestry. Probably no man in Australia was a keener critic of, and had a better knowledge of Australian timbers than Lord Novar. He has gone back, and others before him, and they are all most helpful on the other side of the world in making it clear that while the Dominions are part of the Empire, they certainly have a virile life which will keep the Empire rejuvenated.

In asking you to drink with me to the health of His Excellency, you will join with me in expressing pleasure at the fact that he has come here to-night, and shown his interest in the work of the Architects of this State. As State Governor he will be called upon, and is being called upon, to take part in many functions, each presenting its own interest and its own point of view, and I only hope that when he leaves he will be able to say that our members are a good-looking lot of fellows, and know how to behave themselves.

HIS EXCELLENCY (Sir Dudley de Chair) Mr. President and Gentlemen,—It is a great satisfaction to me to be here with you all to-night, and I wish to thank you very much indeed for your cordial welcome. It is also a special pleasure to meet the members of the Institute of Architects of New South Wales.

I take a keen interest in Architecture, and know of no profession where initiative and talent are so bountifully rewarded as is the case in Architecture. How full of grace and charm are the country homes of England! They stand in their own gardens surrounded by rare blendings of art and nature. They seem to brood in their old age over many scenes of bygone history. Those old Manor houses on which the Tudor builders have left their mark! What more noble and lasting legacy to posterity could we have than these evidences of domestic architecture adorning the countryside and harmonising with their surroundings? Each country has its own style of Architecture. Climate and national character play a part, and time adds to the charm. Sometimes the whole trend of thought regarding Architecture in a new country can change through the initiative and talent of one or more men. Such a case occurred in South Africa, when Cecil Rhodes brought forward Herbert Baker, who is now a big designer in Delhi, India. This man saw the charm and grace of the old Huguenot style of Architecture, debased though it had become through neglect during a century or more. But now a new era has come. These derelict houses, so lovingly built by the old French refugees, have been restored, and other houses built on similar lines, transforming many districts and beautifying the land. The Premier's house, originally built as Rhodes' own residence, is a striking example. How often the beauty of the past is sacrificed to make way for modern improvements!

Architects, roused to a realisation of the sadness of the land from which beauty has flown, have in England suggested the formation of Advisory Art Committees, both in town and country, to interfere when some favoured piece of vandalism is proposed, or to advise when new spaces are being planned. Any man or woman who can show the value of building beautiful and, at the same time, not necessarily expensive houses of a permanent kind, is rendering his country lasting and far-reaching service, raising the standard higher, and ensuring the gratitude of posterity.

Gentlemen, I thank you.

MR. G. H. GODSELL (President of the Architects' Board) proposed the toast of *"THE STATE PARLIAMENT"*:

Your Excellency, Mr. President, and Gentlemen,—It is my privilege to-night to propose this important toast, and I have the greatest pleasure in so doing, because the profession lives under a fine regime with a Governor who supports Architecture, and a Parliament which has done all it could for the profession in New South Wales.

First of all, Parliament gave the Architects the Chair of Architecture at the University, which brought with it Professor Wilkinson, who has done so much for this State. Secondly, Parliament gave us Registration. Now, we have to thank both sides of the House, because on every occasion when Parliament has dealt with the requests of the profession, the matter has been favourably received, and every member of the House has seemed to feel that if the Architects were striving to improve their position, the least Parliament could do was to assist them, and Parliament did so. It commenced with a Nationalist Government; it went on through a Labor Government, where we met with the same kindly support. Therefore, in thanking the one, we must not forget the other. Mr. Mutch, when Minister for Education, helped the profession in no mean way, and it was due to him, when our first Bill was sliced to pieces in the Upper House, that we were allowed to go on with another measure, which ultimately both sides of the House promised to support.

I would especially have liked Mr. Bruntnell to have been present to-night, but I feel sure that Mr. Fitzpatrick, acting on his behalf, will convey to him my thanks on behalf of the Board, and I hope the profession will allow me to say, on their behalf also, for all he has done for us since he has been in power. He has helped the Board to administer its duties in every possible way. He has made things easy, and when I tell you that we have been promised by both sides of the House now that an Amending Act will be brought forward to give the Architects the sole control of finance, and to return the money to the Board that has been subscribed for the work of the Board, although it has gone into the Consolidated Revenue. I think you will understand how good the Government has been.

It has been said that the Board has done nothing. Well, gentlemen, probably you who are here to-night may think the Board has done very little for you because you have not come under the notice of the Board, because you have been carrying on your business in the proper fashion. But had you not been doing so. you would have come under the notice of the Board, for, with a very energetic Registrar in Mr. Williams who seems to find out everything that is moving, and who has a very able chief in Mr. Smith, the Director of Education, there is not very much that is missed by the Department of Education, under which the Board operates. The work of the Board has been very heavy.

In the first instance, the Board met on the 14th August, 1922, and in the first seventeen months from that meeting, to December, 1923, 56 meetings were held, 46 of which took place within 11 months following the closing date of the receipt of the applications for Registration.

Now, applications from gentlemen who said they were Architects in New South Wales numbered 745. The first roll of Architects, published on 30th January, 1924, contained the names of 634 Architects. To meet the cost of administration, the sum of £550 was granted for the first year's work by the Government, and the fees were all paid, as I said before, into the Consolidated Revenue. In the first year the fees received were £2298, but the cost of administration was only £404. It has been said that the Registration fees should not have been fixed at £2/2/-. The Board did not know, and it does not know to-day how heavy will be the work of the Board. But to have a controlling power without any funds would be a disaster. Considering that the money is being returned by the Government to the Board for the benefit of Architecture, I do not think that any right-thinking member of the profession will grudge the £2/2/- a year which is being spent to-day for the benefit of the education of the younger members of the profession. The Board felt that it was no hardship for the privilege which was obtained by Registration for anyone in legitimate practice to put up £2/2/- a year, and we were very anxious that the work of education, both by the University and the Technical College, the only two seats of learning recognised by the Government and the Board, from which degrees and diplomas could be obtained, other than the Board's examinations, should be extended farther than a fourth year of instruction, in order that the best scholars should have the benefit of foreign travel and education abroad, and come back to Australia to give the younger members of the profession the benefit of their experience.

Therefore, the Board found that it would have, when this money was returned by the Government, a sum of about £800 a year for the benefit of Education, and it thereupon founded two scholarships of £200 a year each for the best boy at the University and the Technical College. The Government was so good that it found us the money in advance, and allowed us to send home two reputable citizens who will, we trust, come back and do good work in this State, on the completion of their education abroad. The Board arranged that these young fellows should be looked after in London and on the Continent, and that everything should be made easy for them, that they should fall into good hands. and receive the best assistance they could during their travels. Therefore, I think every member of the profession will say that if the £2/2/- a year rightly expended produces a good man for the profession, or two good men, naturally that money will have been well spent.

The Board was accused, in an article in a daily paper, of sitting down, doing nothing, and enjoying fat fees. I want to tell you all that each member of the Board receives £1/1/- per meeting, for 25 meetings per annum, and as we sat 56 times in the first 12 months, I do not think the fees were very fat; and when you consider that the whole of the cost of the administration, owing to the Board's economy, was only £404 for the first year, I do not think you will consider that we did very badly. There are 600 odd members of the profession enrolled as Registered Architects in New South Wales to-day. They were enrolled by the Board under the Act, because the Act required that they should be so registered under its provisions, which were that anyone who had practised prior to 1921 was entitled to a registration. There are some lesser lights who have only practised in a small way. They were equally entitled to registration, and I trust, as the years go by, with the system of education that we have, the whole standard will improve. Meanwhile, it is essential for the work of the Board that centres should be formed in New South Wales, and that the control of Architecture should be taken up by the Institute, in order that the Institute may report to the Board the doings of the profession on the outskirts of the centre. For that reason, I have ventured, on behalf of my Board, to bring before the Institute the question of affording every Registered Architect to-day the opportunity of joining the Institute, in order that we may be one great live body, and have every member of the profession in New South Wales under the control of the Institute, which will report to the Board. Let us make it one fine working Institution. Let us do our utmost to form one body. It will not be done if members do not attend meetings, and if quorums cannot be found, and if 5 or 10 or 15 turn up, but if there is a general move on behalf of the profession to join up, I believe we can do a great deal to improve the status of the profession throughout this State, and eventually be a credit to the whole world, because we have an opportunity, with a sympathetic Government, and a Governor who appreciates the beauties of our literature and the work of the profession.

Therefore, gentlemen, I trust you will all give your mind to the little matter I have mentioned, and see what can be done to establish one solid body throughout the State.

Gentlemen, I ask you to drink the toast of "The State Parliament."

MR. A. W. ANDERSON (Vice-President): Your Excellency, Mr. President, and Gentlemen,—I am glad that my position is a somewhat subordinate one, and that my predecessor in proposing this toast has placed before you the particular points of view in which we can support the toast of Parliament. It leaves me free to approach the subject from perhaps a more abstract point of view, and I thought I would find out what the word "Parliament" meant, and turning up a dictionary, I found it means "a place of discussion" or "a place of debate."

Now, Sir, in these days, our Parliaments have somewhat, I am afraid, departed from the basic idea of Parliament, which rather originated in the old Anglo-Saxon "Whitun" where the leading lights and the chieftains of the different tribes gathered to discuss what was the best form of Government, and the best laws for the whole community. Instead of having free debate in our Parliaments to-day, I am afraid that democracy has failed, and we have now government outside Parliament. We have caucus government, and our Parliaments all the world over, not only in New South Wales, and not only in the Federal sphere, have broken down, and partisanship seems to be the leading idea of the public life of the whole world. You have only just to remember that Convention which was held a few days ago, when 14,000 people were present in the auditorium at Cleveland, Ohio, to see how far party feeling and partisanship can enter into the public life of the community.

We are proposing the health of Parliament, and we propose that health sincerely, because we look forward to a time when the old free speech, the old free discussion, and the old free vote will take place again. I admit it is an extremely difficult thing to get away from machine politics. They have got such a grip upon us and our public life that the old idea of English independence and British freedom seems to be trembling in the balance. No party has a monopoly of truth, and no party has a monopoly of wisdom, and some time ago, when I proposed this toast, I quoted those lines of Macaulay:

Then none was for a party;
  Then all were for the State;
Then the great man helped the poor,
  And the poor man loved the great.

For Romans in Rome's quarrel
  Spared neither land nor gold,
Nor son nor wife, nor limb nor life,
  In the brave days of old."

You have only to remember what Mr. Godsell has told you to see that when party politics have been sunk into the general welfare we get the best results. He has pointed out to you that both sides of the House approved and supported our Registration Bill, and if you want an example of what good the sinking of party politics can do, you have it in this; the best piece of legislation that was passed at all was a non-party piece of politics.

I have much pleasure in supporting the toast of "The Parliament of New South Wales."

MR. J. C. L. FITZPATRICK (Minister for Local Government).

I am here under false pretences, as I was not the invited guest. I am merely the individual who has come here for the purpose of taking the place of the gentleman who was invited. I have enjoyed your hospitality, eaten and drunk, and had a thoroughly good time, and I have much pleasure now in thanking you on behalf of Parliament and the Ministry, of which I happen to be a very humble member, indeed an undemonstrative member, for the manner in which the toast has been proposed.

I am not going to make a speech. I had placed in my hands a little statement which I have no doubt Mr. Bruntnell, my colleague, would have uttered and amplified, had he been here in place of myself. The Board as constituted is a representative body of men I am told. I believe it. I believe everything that comes from the lips or the pen of Mr. Bruntnell. For we have not only practising artists (I mean architects), but those upon whom devolves the shaping of the future achitects, the professor of architecture at the University, and the lecturer in architecture at the Technical College. The Board is imbued with educational impulses, and in the administration its members have not only to meet the costs incurred in the working of the Act, but to provide a substantial surplus, from which they have been able to award two travelling scholarships. This information was conveyed to me gratuitously, and I use it for what it is worth at this gathering. I am sure Mr. Bruntnell, had he been here, would have been very pleased to hear the remarks of a personal nature that have been passed in connection with his administration of the affairs of this Board. I am sure anything he can possibly do to augment its usefulness will very readily be done in the future as it has been done in the past.

As for Parliament, well, the least said about it the better. An effort has been made by both speakers to say some kindly words with regard to this very-much abused Institution. They have tried to find some merits about it; they have signally failed as far as I have been able to understand. I know the press has been ready to do all that it possibly could to say something nice about an Institution which is generally decried by the community; especially yesterday was such the case. The Income Tax met with dire expressions of disapprobation. I presume the great bulk of those who constitute this gathering paid their income taxes yesterday. I hope they did, in order to avoid the 10 per cent. fine. At any rate, they look as if they had paid it. There does not seem to be any cloud hanging over their devoted heads to-night.

Parliament is alleged by the last speaker to be a place where people speak their minds. They do. Do not make any mistake about that. Did you ever go to Parliament and listen to the debates? No complaint is made about the liberty of speech there. This is an age of combinations, the combination of those who are connected with various phases of art and science, and just as it became necessary some considerable length of time ago to establish a Board which would control the dentists, and bring within a certain area those who had been calling themselves dentists and practising as such, and practising upon poor unfortunate devils of clients in their own rough and ready way, so it became necessary to treat the architects in exactly the same manner. I am told there are 600 architects in New South Wales. Well, to look round some of the streets of Sydney when you take your walks abroad, you would scarcely think there were 60, but everything is being improved now, as the result possibly of this amalgamation of the interests of those who are connected with the profession. The same thing operates in connection with the dentists. We are told that a man had only to have a good strong right arm, and a willing client, and if he did not take the tooth out in the ordinary fashion, at any rate without breaking the jaw, he got as near to it as he could. When the dentist who advertised to take out teeth without pain was called to task for breaking a man's jaw, he said, "Well, I told the truth, I never felt any pain." We will have next to look after our own interests. We will have to establish a Board that will look after the welfare of the politicians. They have failed up to the present time most miserably in looking after themselves. Like all self-sacrificing men in the community, we have left our own consideration till the last.

Joking apart, I am very pleased to be here to-night, and to offer my help and assistance in relation to any movement or any piece of legislation that is likely to improve the status and advance the interests of those who are associated with any branch of industry, art, and so forth, and I am sure, as has already been said by my friend on the left, there is no party feeling or party spirit which actuates members on all sides of the House in dealing with such legislation as has been mentioned to-night. It is done in the best interests of those who are architects, and the public generally, and in my 30 years of experience I have never found that any objection has been taken to the introduction and passage in ordinary form of a piece of legislation of this particular character. We fight amongst ourselves a little bit at times. There is no royal road to office. You have got to take any road that will lead there. The easier the better, but the more difficult it is, the more vigorously will we fight to get there, and once we get there, do not make any mistake, we take a lot of shifting.

I will certainly take advantage of the opportunity, when I come into contact with my colleague Mr. Bruntnell, who is the Minister under whose Department this Board is to operate, of informing him of the commendations that have been offered as far as his association is concerned.

I thank you, gentlemen, on behalf of Parliament, and also on my own account.

HIS EXCELLENCY:

Mr. President and Gentlemen,—I feel it a great honour to be asked to propose the toast of *"THE INSTITUTE OF ARCHITECTS OF N.S.W."* I feel it is really making me one of your own body. (*Hear, hear.*) If I had been asked to propose the toast of the Naval Archichitects, I might have been more at home, because I may tell you that at one time I was at the Admiralty as Assistant Comptroller of the Navy, where all the designs of ships were made, and I had a very interesting time, and was elected an associate of the Naval Architects.

I understand the oldest body of Architects in Australia was founded in 1871, registered a body corporate in 1890. The object and policy of the Institute is the advancement and uplifting of Architecture, and it recognises that the duty of all Australian Architects is to solve the special architectural problems of a country differing in many respects from any in which Architecture has flourished. In Australia there is as yet no architectural tradition, and it is in the hands of the architects of to-day to show what is to be the Architecture of the future. This spirit of architectural freedom comes to the Architecture of Australia through you.

It was due to the efforts of the Institute of Architects that the faculty of Architecture was established at the University of Sydney, the first in Australia. Professor Leslie Wilkinson, I understand, is the Dean. The Institute was responsible for the calling of the first meeting of experts, Architects, Surveyors, Engineers, and Town Planners, from which resulted the Sydney Regional Plan Convention of 1922, whose objective is the laying down of a regional plan scheme to serve the future City and a greater Sydney within a radius of 30 miles. To the initiative of this Institute was due the first conference of the Australian Architects 22 years ago at the time of the birth of the Commonwealth. At that time it was hoped that a Federal Institute of Architects would be the outcome of the Conference, but opinion was divided, and it was not till some years later that a Federal Council of Australian Institutes of Architects was established. This Council is recognised as a body to which the Commonwealth Government refers, and with which it confers on matters of great Architectural importance. In 1922 a Registration of the Architects' Act was passed by the New South Wales Government. The measure had little or no effect upon Architects in practice, but its saving grace is that it will compel students to work up to a standard of qualification which is fairly high. Major-General Sir Charles Rosenthal is the President of the Institute, and is the most prominent returned soldier architect in the State. His brilliant record during the late war when in command of the Second Division of the Australian Imperial Forces is known as well throughout the Empire as in his own country, and his brother architects are proud of him.

Of the most prominent personalites connected with the Institute during its early years, I may mention Mr. George Allan Mansfield, Mr. Thomas Rowe, Mr. Aubrey Hunt, Mr. James Macdonald, and Mr. Arthur Frederick Pritchard. Mr. Mansfield was President for two terms, and was a man of great business ability. and his success as a practising Architect was the means of bringing prestige and public support to the young Institute; and there are others. Many are the activities of a live Institute such as this one, with a roll of 260 members. Much has been done and much remains to be done, and future ages will be grateful for the good work and careful guidance given by this Institute.

Gentlemen, I have much pleasure in proposing the toast of "The Institute of Architects of New South Wales."

SIR CHARLES ROSENTHAL:
Your Excellency, on behalf of the Institute I would like to say how very much we appreciate the kindly expressions to which you have given voice, and the way in which the toast has been responded to.

I would like to refer to the remarks of Mr. Godsell concerning the getting together into one body of all the Registered Architects. More or less directly as the result of Mr. Godsell's suggestion, delegates were appointed from the Architects' Association of New South Wales and the Institute, and we have had a happy conference, and it was decided that the time was ripe for amalgamation, and that opinion was in due course referred to the Council of this Institute, and they have cordially endorsed it, and within a few days the members of our Institute will be asked to consider the proposal for that Association and our Institute to be joined together. When that is done, we propose going further, and accepting Mr. Godsell's suggestion of inviting all Registered Architects throughout the State to join the Institute. We hope all our members will join with us in bringing this to a successful consummation not later than December of this year, so that from the 1st of January next year the way will be free for all practising Architects in this State to become members of the Institute.

Our Institute is trying to fulfil a useful purpose. The services of the Council and the members are always available to the public when difficulties arise, as they sometimes do, between Architects and clients, and Architects and builders. One particular object of the Institute is to see that the standard is high, as His Excellency has suggested, and that it is maintained high. The work of the University and the Technical College and the Board by joining in with the Institute augurs well for the future of Architecture in this State.

Gentlemen, on behalf of the Institute, I thank you.

PROFESSOR WILKINSON:
Your Excellency, Mr. President, and Gentlemen,—The pleasure of proposing the toast of "*KINDRED SOCIETIES*" should have fallen to the lot of Mr. B. J. Waterhouse, and I am sure you will all regret that he has found it impossible to be present.

The representatives of Kindred Societies whom we are happy to have as guests here to-night are many in number, and it is one of the delights of our profession that we should come into contact with so many members of those Societies during our ordinary work. I shall take a leaf out of Mr. Anderson's book, and look into the meaning of the word "kindred." We have passed through the stone, the bronze and the iron stage, and we are now in the age of Arts. We find "kindred" means "congenial," "related," "allied"; and if we look up "congenial," we find it means "partaking of the same nature." Now, the banquet we have consumed to-night has been provided by a bounteous nature. Kindred Societies are Societies partaking of the same dinner; that will bring in our other guests who do not belong to any of these Societies, learned or otherwise. Some of these Societies have obtained the right by their age to be known as learned, but I am sure the members of all are learned, and also very practical, and we come more closely in contact with the members of some than others.

We have as our guests representatives of the Architects' Association, the Engineers, the Surveyors, the Master Builders, the Regional Plan, the Royal Colonial Institute, the Royal Society of Artists, the Millions Club, and the Rotary Club. Our President has explained how we should like to hear them all defend themselves, but there is a time limit. Without Surveyors we often could not make a start with our work at all. Without the Engineers some of us could not get very far with our dreams, and without the Master Builders, our dreams would remain paper dreams very often. I need not mention the necessity of a client, of course, but without the work of some of the other Societies I am afraid we could not even get as far as our paper dreams; so that it is appropriate that all these should come together to-night. Whatever these Societies are working for in their different spheres, they are all out after the same thing—to improve the conditions in this world. Some would do it with a spoon, some with an axe, some by planting trees. No doubt, the way to do it, whatever Society we belong to, is by hard work, preceded by hard thought, and fortified by funds, but the more of the two former we put into it, the less will be required of the latter.

I have great pleasure in proposing the toast of "Kindred Societies and our other guests."

SIR HENRY BRADDON:
Your Excellency, Mr. President, and Gentlemen,—It is really sheer effrontery on my part to answer for the Regional Plan Convention, since I can only claim at the best to have been more or less connected with it, less to my shame rather than more. At the same time, I have taken a mild part in its work, and if I may presume so far as to speak, I may say I am delighted as their representative to have been the recipient to-night of your very fine hospitality.

I submit that you Architects belong to a very fortunate profession, far more so, in one way, than those who belong to the world of affairs as I do. All of us, I think, are apt to find the prospect beautiful on the other side of the distant hill. The rainbows all have their places in the region just beyond our experience. Translating that into ordinary words, bringing it home to ourselves, most of us are apt to think the other fellow's job is a much nicer one than our own. The reason is that we know all about the successes of the other people, but we do not hear quite so much about their efforts and their struggles. But one great respect in which you have a better job than the business man is in what I might call the comparative certainty of remuneration, and that applies to most of the professions. Take the medical man. You go to him as a patient; he lays you out on an unsympathetic slab; he carves at your interior; he investigates it, and he satisfies himself as to what is the trouble. If you are fortunate, you survive, and you pay his bill. If you are unfortunate, you go to Heaven, and your Estate pays the bill just the same. Take the legal man. He advises you upon your case, expertly and carefully perhaps. You go into the Court and you may lose it; it does not matter; he gets his fee just the same. On the contrary, let the business man make a mistake, and it does not matter whether it comes home to roost in six or twelve months; it inevitably does come home.

It exhibits itself in the unprosaic figures of a balance sheet; there is no dodging Nemesis.

Joking apart, I do think that your profession is a very happy one in one great respect, and that is in the bright side of it. It must be a fine thing to embody the emanation of your brain, skill and training into a design, and then see that design translate itself into something tangible and visible. Surely that is a fine thing, and when you have achieved your result, it is there for many years. The best results men like myself can achieve disappear in the balance sheet of which I have spoken.

Let me thank you again on behalf of the Regional Plan Convention for your hospitality, which I have enjoyed thoroughly; and now I leave it to the other representatives to answer for their various Societies.

MR. GIBSON:
Up to ten minutes ago I had thoroughly enjoyed my dinner, and then I heard somebody say that I was to respond on behalf of Kindred Societies.

I am here to-night as the representative of the Rotary Club. Exactly what category we fall within I do not quite know, but I can assure you (and Sir Henry Braddon will bear me up) we certainly come within the sphere of artists. As an engineer, perhaps I may offer my felicitations to the Institute of Architects on the success achieved so far as their registration is concerned. As a private engineer, I have on many occasions enjoyed association with Architects. I can appreciate Professor Wilkinson's remarks with regard to dreams which Architects put on paper. I should only like to say that our association usually begins with the Architects when the dream becomes a nightmare.
I thank you for the hospitality which you have extended to me to-night as the representative of the Rotary Club, and for the kindly way in which you have spoken of Kindred Societies.

MR. PETER BEDDIE:
Your Excellency, Mr. President, and Gentlemen,—On behalf of the Master Builders' Association of New South Wales, I thank you for the cordial way in which you have received and honoured the toast of Kindred Societies, and also for the kind remarks that Professor Wilkinson was good enough to make in reference to those bodies.

The Association which I have the honour to represent is very closely allied with your Institute in business matters, and although we do not at all times see eye to eye, especially in regard to the matter of "extras" and "final accounts," yet on the whole we get on very well together, and owing to the admirable system of the conditions of contract and the quantity system which was arranged by the co-operation of the two bodies, I think that if those rules are loyally adhered to by both sides, they will be a means of overcoming all difficulties that may crop up, without serious trouble. There is no doubt that close co-operation between your Institute and our Association is highly desirable in the best interests of the community. It is your part to design and supervise, and ours to transfer your ideas from paper into the solid practical results which will remain for many years to come testifying to the capacity of those concerned in their erection.

Another good work our Association is doing, and for which we get little credit, is the training of mechanics and tradesmen, without whose skill and co-operation the brightest ideas of both architect and master builder would be incapable of being interpreted in the solid monuments you see in the City to-day. At the present time, chiefly owing to the Great War in which your worthy President and many of your members earned great distinction, and in which our Association was also worthily represented, together with the shortening of the hours of work in the building trade, all over the world there is a great shortage of mechanics. In order to overcome this difficulty, and to give an opportunity to those who have gone past the ordinary age of apprenticeship without entering a skilled trade, our Association has recently instituted classes of intensive training in the bricklaying and plastering trades, in which the greatest shortage of mechanics was felt. The idea of these classes is to give young men desirous of entering the building industry an opportunity of three months' intensive training. In each trade we have several skilled instructors, men who have gained high distinction at the Technical College, who devote the whole of their time to the tuition of students. The result has been very gratifying. Up to date somewhere about 200 men, who, but for the starting of these classes, would have had to serve a life sentence as unskilled labourers, have been introduced to the building trade. In the system of training they receive, which is practical and theoretical, these men leave at the end of three months with a very much better knowledge of the higher part of their course than quite a number of ordinary tradesmen possess who have served the usual apprenticeship. I think in a short time those students will rank among the foremost of our mechanics. We are getting some opposition from the Unions, who take the shortsighted policy of opposing these classes, just because it is not what they have been used to. They forget the world moves very fast. We think that any man who has the desire to improve his position and rise from a labourer to become a mechanic should be given the opportunity. While it is possible for any man of any age to acquire a profession by means of study, it seems incomprehensible that you should find men who are opposed to a man who for various reasons has been prevented from entering a skilled trade on leaving school, being debarred henceforth from improving his position beyond that of a labourer.

I notice my friend Mr. Fitzpatrick is here, and I hope that as he is the Minister in charge of Local Government, and has, I believe, good influence with the Treasurer, he will perhaps see his way to giving us a little assistance. Up to the present the cost of running these classes has exceeded £4000, and we hope, considering their national benefit, that the Government will step forward and afford us some help. The country gets the benefit of skilled mechanics. More labourers' positions become vacant, thereby increasing the work for labourers.

On behalf of the Master Builders' Association, I offer you congratulations, and tender you my sincere thanks for your invitation to be present here to-night.

MR. E. A. SCOTT:
Any man ought to feel honoured in proposing the toast of *"THE PRESS OF AUSTRALIA."* The Press has nothing to be ashamed of, and I can assure you that we, the members of the Institute of Architects, owe a great deal to it. I would ask the Press, severally and jointly, to assist us still further. We are, I believe the only Institution which has ever approached the Government for the appointment of a Board for our regulation, not for our own benefit, because we knew we could personally derive no benefit from it, but we

wanted it for the benefit of the public generally. We did not receive the assistance from the Press that we might reasonably have looked for. In the future, I trust that the Press will seriously consider, any move made by the Institute of Architects for the general benefit.
In regard to Architecture, next to the necessity of getting something to eat, it was the first thing that man thought of. It is now coming into its own. Every day Architecture in this State, as well as the world over, is being more carefully observed. Putting it on the lowest standard, Architecture to-day is very good copy, and I think the Press might reasonably turn its attention to assisting the Architectural profession by a candid and constructive criticism. I personally consider it would be one of the finest things we could have. We read the description of various buildings erected. I would like the Press to take the position of critic in regard to those buildings. It would help us and the public, and I do not think the Press would lose by it. We have from time to time descriptions of buildings, and if the Press would take upon itself the duty of criticising (but, mind, it must be by people who know better than the general public, and free from all ideas of a particular class) we, the members of this Institute, would receive with the greatest of thanks the assistance of the Press in this direction, because we recognise the Press is a very fine Institution in this State.

Gentlemen, I ask you to drink the toast of "The Press of New South Wales."

MR. SYDNEY URE SMITH:
I feel, in responding to this toast, that I represent a very small section of the Press of New South Wales, but I hope not an unimportant one. As far as the Journal which I represent is concerned, I might say that we have always tried to do everything in the interests of Architecture in Australia.
I have listened with great interest to His Excellency's remarks, and to his suggestion in regard to a State or Advisory Board. I think that the alliance of Art and Architecture can only be successfully accomplished by the formation of such a Board, and we have often talked about it. I remember I mentioned it at your Annual Dinner last year. I do hope something will be done to bring this idea to completion, because I feel that much useful work can be done by it. There is, I understand, a Federal Art Advisory Board, but I think its power is somewhat limited. If we had a State Advisory Board, much could be done for the beautification of our City. There are many ugly things in Sydney, and many things that could be improved, such as the supervision of lamp-posts, tram stops, advertisements on trams, hoardings, signs on buildings. All these could be properly supervised by such a Board. The Institute has done much valuable work in this State, especially in latter years. It has been responsible for a great advancement in Architecture both in the City and the suburbs. The Regional Plan Convention, which I think is a notable work, has started in the proper way to re-form the City in the right manner, and I wish it every success.

I cannot close without mentioning the great influence of Professor Wilkinson in training the students at the University. I think we owe him a great debt for the valuable work he has done here, and I would like to congratulate the Institute on the progress it has made, which is very noticeable, especially at its Annual Exhibition.

Gentlemen, I thank you for your invitation to be present here to-night.

(The gathering closed by the singing of the National Anthem.)

INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES
ORDINARY GENERAL MEETING
7th JULY, 1924

THREE ADDRESSES ON
THE PURPOSE AND INFLUENCE OF STANDARDISATION

By J. NANGLE, F.R.A.S., F.I.A., *Superintendent of Sydney Technical College*
W. J. NEWBIGIN, *Past President of the Institution of Engineers*
J. P. TIVEY, B.A., B.Sc.., A.M.I.C.E., A.M.Am.I.E.E.

Sir Charles Rosenthal (President) occupied the chair.
The Minutes of Meeting held on the 2nd June were confirmed.

Apologies were announced from Professor Wilkinson, Mr. Hadley, Mr. Gardiner-Garden, and Mr. Anderson.

THE PRESIDENT: This afternoon the Council dealt with the matter of competitive designs for Canberra. There has been a more or less general opinion expressed among those who wish to compete that the time allotted is altogether too short. Designs have to be in by the end of September. The feeling of the Council was that undoubtedly the Commonwealth Government should endeavour to get the benefit of the best brains in Australia, and a good deal of those brains happen to be in the heads of those who have their practices to look after. The Council felt that if the designs could be sent in on the 31st December, giving another three months, that would be fairer. We want to communicate that opinion to the authorities in Melbourne, but first submit it to members present this evening in order to get their views. The adjudicators themselves do not yet know what the Commonwealth Government wants. Competitors will have to go in for a considerable amount of research to ascertain what the requirements of the Federal House will be. We will not know until the 14th of this month what those requirements are.

(The members present were unanimously in favour of applying for an extension of time.)

THE CHAIRMAN announced that the Institution of Engineers, Sydney Division, had extended an invitation to the President, Council, and Members of the Institute of Architects to attend a meeting, to be held on Thursday, 10th July, at 7.45 p.m., when a paper on "Notes on the preservation of wooden poles" would be read by Mr. John Murray Crawford.

THE CHAIRMAN also announced that on Monday, 4th August next, a lecture would be delivered by Mr. Milner Stephen, an Alderman of the City Council, on "Some impressions of travel."

MR. BUCHANAN drew the attention of the President to the fact that, at the recent dinner, an invitation had not been extended (probably by an oversight) to the President of the Quantity Surveyors' Institute, an institute which is very closely associated with architects.

(It was decided to send a letter of explanation and apology.)

THE CHAIRMAN announced that a brother architect, Mr. J. E. Justelius, had recently passed to the Great Beyond.

(It was decided to send a letter of condolence to the family.)

THE CHAIRMAN announced that Mr. A. J. Gibson, M.E., A.M.I.C.E., who was to have spoken, had sent an apology, and that Mr. W. J. Newbigin would take his place.

THE CHAIRMAN, in introducing the speakers, said:

Mr. George King, of Geelong, Principal of the Technical College there, who has done excellent work for years in Victoria, periodically brings students to Sydney. We met him officially with some of his students, and we also put him in touch with Mr. Nangle's office, so that their week or fortnight here might be of benefit to them. I would have been glad if some of these students could have been here to-night, in order to meet Mr. Nangle. Mr. Nangle is an old friend of mine, and has done some extraordinarily good work for the community. Mr. Tivey has reminded me that we met 20 years ago, when I was first attempting to qualify for a commission in the Garrison Artillery. I remember he was good enough then to come along and help me. We are glad to have Messrs. Newbigin and Tivey here to-night not only because of the addresses they will give, but because they belong to a kindred profession, and I am sure it is a good thing for members of these professions to meet and hear one another's viewpoints. It has often been said that each year brings closer together the activities of the architect and the engineer.

FIRST ADDRESS

By J. NANGLE, F.R.A.S., F.I.A., *Superintendent of Sydney Technical College*

I CERTAINLY did not look forward to being the first speaker to-night. I think Sir Charles was probably fairly correct when he suggested that I might be glad to have a few tips from those who preceded me.

Standardisation to architects is likely at first sight to be a term of repugnance. I remember I have at home a little statuette, which I think is a very beautiful piece of work, and I take pride in it a little more because I know there are only 100 of them made. It appears in my eyes to have a little more value when I remember that everybody in the country cannot have one.

The architect very often is called upon to do work which is distinctive in character. Every architect thinks the design he turns out, and the building that he supervises and brings to completion, is one that will stand out among all others as characteristic in its beauty and usefulness. On the other hand, I remember, when I was a young man in this City, one thing more abominable than anything else to me was the constant repetition of a certain kind of balcony railing of cast iron. It was produced in three or four designs, and there were literally miles of that railing in the metropolitan area. I suppose at first sight architects would think that standardisation is not a thing at all for the architect, but the matter has another side. It is extremely advisable, both in the interests of economy and usefulness, that much more of the materials and forms used by architects should be standardised than is the case at present. Standardisation does not mean turning everything out of the same mould. I know of only two things that are completely standardised. Users of the wonderful little instrument called the Microscope will remember with a certain amount of delight and pleasure that there is one part of that instrument that is standardised all the world over. I refer to the small lens at the lower end of the telescope called the Objective. No matter where the objective is made, the thread is always the same. The other completely standardised thing is the Ford car. When I mention those two things, I mention two very good things. The latter has rendered an enormous service to the world. One has only to travel over the wide expanses of this

Commonwealth to realise what a service the Ford is rendering, and it is largely because it is a completely standardised article.

Standardisation is not new to this Institute. I remember many years ago there used to be tremendous difficulty as to understanding what was meant by certain terms used in connection with rubble masonry. There were mixed ideas as to what was meant by "rubble" under any particular name. This Institute set to work and standardised the kinds of rubble walling, and I know what was done at that time was of great value to architects and builders of this City. The question arises whether some of that kind of work should not be done in the interests of the country. I was somewhat taken by a leaflet issued by the Institute of Engineers, working under the aegis of the Commonwealth Bureau of Industry. This puts the case for standardisation very well. It will provide a truly competitive market in which to buy material and equipment, will make it easier to repair and replace equipment, will reduce the cost of manufacture and will simplify the keeping of cost accounts. It will eliminate most of the controversies as to whether the product is in accord with the sample, and will give accurate definitions to enable one to know what he is talking about, what he is buying, and whether he is getting what he is buying. The question is whether those definitions can be made to usefully apply to the range of materials and forms used by the architect in his practice, and I think it is possible to show that definitions can be offered in practice to much of the work of the architect.

TIMBER.

The position is worse than it was 20 years ago. An architect wants to provide for certain stresses in some part of the building, the floor or roof. He is necessarily not able to make tests to enable him to determine the qualities of timber that he should use. The quality in that case is the all-important thing. When a certain kind of Australian hardwood is specified, there is not the slightest guarantee that you will get anything like what you have in your mind when you are making your calculations and plans. The question of seasoned timber is, to-day, far more troublesome and unsatisfactory than it was 20 years ago. It was unsatisfactory enough then. I need not remind you that, apart from strength, durability depends upon the quality of the timber. I have often thought that a good deal of the trouble we have with the borer is due to using timber of poor quality. I think it has been demonstrated that these pests bore only in the sap wood. It seems to me that if some attempt were made to standardise the quality of timber as regards its kind, seasoned state and size, it would be beneficial. Much of the anxiety that now has to rest on and bear down the mind of the architect would disappear and property owners would benefit immensely. I suppose it is quite hopeless to attempt to ever again revert to naturally seasoned timber. We ought, however, to make an effort to determine the best method of artificial seasoning. A distinguished member of the Institute, close on 30 years ago, made a tremendously important series of tests on the strengths of Australian timbers—I refer to Mr. Julius. He showed conclusively that the strength of the timber depended largely on whether it was unseasoned or seasoned. As a matter of fact, green timber gives a wrong value. Timber is not as strong when seasoned as when green.

BRICKS.

I will defy anybody to go to-day and get bricks from any two manufacturers agreeing in size. Some are longer—some shorter. It was shown years ago in important tests by a distinguished officer of the Royal Engineers that brickwork of a certain thickness of joint was stronger than brickwork made with thinner or thicker joints. That indicates to me that it would be worth while to endeavour to standardise the thickness of joints where strength was of any consequence in the wall or pier being designed. There is an agreement between the proportion of length to breadth and the thickness of joint. It ought to be worth while in that respect alone to endeavour to standardise the size of bricks. Who has not had to make an addition to an existing building where bonding is necessary, and it does not require that the building should be very old to meet with trouble in the bonding. It is impossible to make a correct estimate where there is that degree of divergence in sizes that one meets in this country. Some effort ought to be made to standardise the size of bricks. The architect, in making out his half-inch scale details, has to be careful to measure the brick that is to be used, otherwise his rods and scales will be practically useless. With regard to quality, bricks vary as much as possible. They are not even well shaped, although the bricks we make in this country are good—no country makes better. I see no reason why, with some degree of system, which would come about as the result of standardisation, the quality would not improve.

MASONRY.

One of the most senseless units of measurement is the perch—16ft. 6in. long, and 1ft. 6in. wide. It is a survival of an old custom actually connected with the surveyor's chain. It seems to me that I can instance that as a senseless unit of measurement which wants attention. I would suggest that all these measurements of brickwork, masonry and timber, ought to be carried out as in the United States, on a decimal system. It would not be difficult, not like changing the weights and the money scales. We could easily change to a system of measurement of all building materials that would enable computations to be made easily.

I can hardly think of one material used by the architect or builder that would not well repay some attempt at standardisation, not only in quality but in regard to size. It will give accurate definitions and enable one to know what he is talking about and buying, and whether he is getting what he intended to buy. At present he cannot do that—the architect is placed in a tremendous difficulty in that respect alone. He does not often realise the legal position in which he is placed.

Much could be done also in connection with the lighting, fittings, sanitary fittings and furniture. I do not want to deny the right of the architect to have his special designs carried out in those respects—there is no argument against that at all. Even in such cases, there are certain parts of those fittings which might well be standardised, and not interfere at all with the design. When it comes to the question of the cases (by far the larger) where small homes are being built, then it would be worth while to make an attempt to have a complete standardisation in fittings of all kinds. There are only a small proportion of the buildings in this country which are designed or carried out by architects—the greater number are put up without the help of the architect. I think it is a matter for regret that the architect is not consulted. Even in the smallest dwellings it ought to be worth the while of the owner to employ an architect. Architecture is not, and should not, be composed of a body of men interested only in carrying out design or work narrowed down to the individual practice of each member. The profession realises that it is concerned with the whole of the building work of the country, whether personally connected with it or not. A simple, pleasing and healthy form of dwelling is a matter which must arise out of the efforts of the architectural profession. It is the duty of the profession as a body to see that the ordinary dwelling house of the working man is satisfactory in the respects I have mentioned. Unfortunately, there is a greater need for that sort of interest from the profession now than there was in pre-war days. The whole world prior to the war was receiving the advantages of extremely poorly-paid labour in various countries, and in our own old country. It was possible to get abundance of things at very cheap prices. In pre-war days a pretty, comfortable cottage could be bought for £450; it now costs £1100 or £1200 to-day. This state of things is not only due to financial adjustments, but labour is getting better paid than in pre-war days. To-day it is almost impossible to buy a home on account of the exceeding cost of it. I am speaking, of course, of the small buyers. Something must surely be done towards providing a cheaper type of dwelling, which need not be an uglier dwelling. At first sight it might appear exceedingly objectionable that all windows and doors should be the same size, but there is really nothing so objectionable. Ever since I went to the trade, the size of the sash and the box frame has remained pretty well the same. The window frame reached its present form as the result of years of experience. If those were standardised, certainly they could be purchased for less money, and the quality could be better. Sometimes it is necessary in my place at home to replace a sheet of glass. I have often been struck by the fact that in windows in which the panes are all supposed to be the same size, no two panes are the same size. It is useless to send for a stock size; one has to get it cut specially, and consider the waste there is in the cutting of it. How can we best get a durable thing—a good job? We will get those things more easily if we attempt some form of standardisation. If you support this scheme it will have its birth under the best possible conditions. In any particular article, when it is a question of determining what is the best size, you will have the best brains of the community, and what is decided on will be the best form.

GROUND FLOORS.

You could easily have a standard size of ground floor. I am speaking of that floor which is built in 90 out of 100 houses. A standard type of support, same distance apart, standard bearers, plates, and ground floor joists could be used; instead of finding one architect who will put in 6 x 3 ground floor joists, supported at intervals, say, of 6ft. by bearers; and another will use 3 x 2 joists, and support at intervals of 4ft. I wish to impress upon you that it ought to be worth while to make a serious attempt to standardise many of the materials and forms used by the architect. I believe you would not interfere with the province of the architect in displaying his individuality, whether in domestic or public work. A lot of it can have no possible effect on that side of the question. I say the all-important question is that of getting well-situated, healthy homes at the lowest possible cost.

It is a particular pleasure to me, Mr. President and Gentlemen, to say a few words in support of standardisation, because I have done an immense amount of testing of the Australian materials, as many of you know. It was a hobby with me, a work I carried on purely for the pleasure of it.

One thing above everything else that was borne in upon me was the heterogeneous supply of material in this country, the uncertainty of getting it, and the utter want of any system. The Institute of Engineers, in working to get the support of this Institute, is aiming at a matter of public importance. The architect is not merely a man busy carrying out his own practice. When a doctor enters upon his profession, he gives his time, day and night, to the community. When an architect enters into the study and practice of his profession, he should regard himself as a social unit, as a man who is devoting his life towards the housing of the people. This scheme of standardisation will prevent waste, will certainly secure a better type of building, especially the ordinary type, and will bring a home within the reach of many who now find it difficult to secure one.

SECOND ADDRESS

By W. J. NEWBIGIN, *Past President of the Institution of Engineers.*

GENTLEMEN, Mr. Nangle has had an enormous advantage in speaking first. Having no knowledge whatever of your profession, I came here to-night quite prepared to tell you how to carry it out. I believed that you had a great advantage over many of the other professions, in that I believed that you had made some very material progress in the way of standardisation. In my ignorance of the work you do, I believed that, being free to a large extent from legislative interference, you had succeeded in absolutely standardising one of the major items of your construction material—that is, the brick. I have learnt that no two factories turn out the same brick. Having come here to-night to compliment you, and having found that you have not done as I thought, I am left with the painful necessity of improvising. Again, I believe there is one thing you have standardised, and to that extent you are far ahead of us. I believe, after consultation with the master builders, you have standardised conditions of contract. (Sir Charles Rosenthal: "And scales of charges.") Consider the disabilities under which engineers have to live, when every department of every Government throughout Australia thinks it necessary, when calling for tenders for any engineering requirements, to produce conditions of contract which differ from every set previously issued. Every tenderer has got to produce conditions of contract which may run up to 120 classes. If the architects have done nothing more than to standardise those conditions of contract, they have done an enormous amount towards what we are putting before them to-night. Mr. Nangle has mentioned the Ford car. The fact of that being standardised will not prevent anyone who wishes to do so from buying a Rolls-Royce. If you have standardised products, you can, as architects, produce a standardised cottage at a price within the means of the ordinary wage-earner. That does not prevent you exercising your skill and genius in building more elaborate houses. Even in the most elaborate house there is no reason why standardised products in matters of detail should not be introduced. Standardisation is not new. While I have no knowledge of the ramifications of your profession, there must be unlimited cases where some degree of standardisation would be of enormous benefit to your clients, and if so, to you, too, because standardisation not only helps the consumer, but it helps the supplier.

The Commonwealth Engineering Standards Association does not set out to standardise anything. All the Association does is to appoint committees and panels of those people who know how to standardise their own products. The whole purpose is the appointment of those committees, and the correlation of their results when received back. We are not asking you to go blindly into any scheme of standardisation of any particular body. We are asking you to co-operate in the essentially national work of discussing this matter with those people who know their own particular profession from the commercial and manufacturing side, and when you have agreed upon what you want, then the Commonwealth Engineering Standardisation Committee will issue a tentative proposition. In lending your support to the Commonwealth Engineering Standardisation Committee you are committing yourself to nothing which will do you any injury, but you are taking action which will react to the advantage not only of the workers and capitalists of Australia, and the professional men, but to the whole Commonwealth of Australia—which is ourselves.

THIRD ADDRESS

By J. P. TIVEY, B.A., B.Sc., A.M.I.C.E., A.M.Am.I.E.E.

MR. PRESIDENT and GENTLEMEN—I have never had the opportunity of abusing architects collectively before. I have had the opportunity of speaking individually to them, and giving them my opinions very fluently. Mr. Nangle is responsible entirely for this stream of abuse. He brought to my mind several things which have been rankling for many years. I understood you to have standard window sashes, I believe, 31in. wide. Fabrics of which blinds are made are made either in single or double widths, so that you can never get a window blind with a double selvedge. I have had to cover many windows and that has always been a sore point with me. Linoleums are usually 72 inches wide. I shudder to think of the waste that is caused by architects in building rooms 14 x 13, when perhaps that room might be narrowed to 12ft. without much disadvantage to the cottage. If the odd dimensions are persisted in there must be waste, and consequent greater expenditure for the poor people. I am entirely ignorant of your profession, but I have always had the impression that architects were pioneers in standardisation. I remember pictures in dictionaries of the various Greek orders of Architecture, and it seems to me that those are standards of architecture. Coming to a later date, the Tudor-Gothic is a standard which was not despised by many architects in England. Even in our own City, 15 or 20 years ago, the Queen Anne style seemed to be a standard, and there are buildings standing to-day as mute witnesses that the Queen Anne style was not dead then.

I wish to draw your attention to some phases of engineering standardisation, although I do not intend to suggest that there are not many other avenues besides engineering in which standardisation could not be effected. In Australia we have six State Governments and one Federal. The result of that is that there are six Company Laws in Australia, no two of which are the same. It is recognised that uniformity of Company Law would be useful in Australia, but although this has been long recognised, and attempts have been made to bring it about, nothing useful has been achieved.

It is firmly believed by some that long hours for work lead to inefficient work, and that short hours lead to efficient work. If we accept this proposition as true, then we must keep our machines from having idle hours These machines are not idle while useful work is being performed, but the machines are idle while changes are being made in the tools or in the set up of the machines. Not only are the machines idle, but, to a great extent, the skilled operatives are idle also, and we therefore have a waste of machinery and of labour. The war demonstrated clearly the necessity of preventing wastage of labour as well as material, and although it left other serious lessons, this one is a marked improvement. In Australia we are starting industrial enterprises when everything seems to be against their success. Commercial and industrial competition has been intensified. Labour demands a higher standard of living, and our markets seem to be limited. It is, therefore, urgent that we should study all those factors which affect our material progress, to see how they can be stabilised, and give those results which we hope will accrue, when the producer will see a greater output at a reduced cost.

I would like to quote to you the Ford plant, where totally unskilled men are taken, and, after two or three days' training, are put on a job. Each of the jobs on the Ford plant is a simple one, and each is efficiently carried out in many cases by unskilled men, simply because these men are kept at the one job.

The main Committee of itself does not prepare a single standard. It directs the organisation, coordinates the work, publishes the results, and tries to find the money necessary to carry on the work. Engineers, chemists, architects and representatives of other professions have given their work free to the Association. An honest attempt is being made to give every one in the slightest degree interested the privilege not only of reading the specifications after they are prepared, but of assisting actively in their preparation. Standardisation is not, and never can be, coercion either by the Government, or by any section over the other.

Before I close, I would like to direct your attention to what is being done in other parts of the world. In the United States, three main standardisation authorities, which have been operating for some 15 years, have recently joined hands, forming one general standardising association in the United States. In Canada a Standardising Association has been formed. In Germany, one was operating some three or four years before the war started. Standardisation Associations are actively at work in France, Belgium, Italy, Sweden, India, South Africa, and last, but by no means least, in Great Britain.

(The speaker here quoted extracts from lectures given by Mr. Harold Cox, before the Institution of Civil Engineers, two years ago, in which he incidentally referred to this question of Standardisation; also by Sir John Wolff Barry.)

That, Gentlemen, is a review of the venture of Standardisation in Great Britain as a modern factor. If, in 15 years, the Australian Commonwealth Engineering Standardisation Association, looking back, can say the same thing, then the work of that Association during that time will not have been in vain. It must be remembered, however, that satisfaction with any such review cannot be felt, and never will be, unless we have the warmest co-operation of every one who is interested in the welfare of our country. As engineers, it has been our privilege to start this movement, and, as engineers, we believe there is no body of whom we can better ask assistance and co-operation than the members of our sister profession of architecture.

THE CHAIRMAN: It makes one look into space to hear this question raised, because it leads us very far afield. Although architects may have attempted to do something in the past, one now realises that the ramifications of both engineers and architects extend all over the Commonwealth. We have got to look to Commonwealth and not State standards, and that takes us further again. Those engineers were trained in some cases at our own Universities. That is where we want to start, and not wait until the men are trained. If our students going through the University and Technical College can have impressed upon them the value of standardisation, while being trained, they will probably better appreciate what it means. That takes us further again. While it is an estimable thing that this Association should have been established, with its sub-committees dealing with its various aspects, remembering that those who are participating are trained men and highly qualified, it brings us to this point; that, after all, their deliberations can only result in recommendations, and it depends upon public opinion, largely guided by the members of the various professions, whether those standards are going to apply or not. The question of cost comes in. The Ford car is an excellent example abroad of the result of increasing wages and shortening hours. In many of our industries we find much of our expensive machinery is left idle. Why cannot our Broken Hill works compete with Belgium? Why can Ford lay down a six hours' working day, and still make a profit? Surely because Ford works six hours, with four shifts, thereby having the whole of his plant working the whole 24 hours. If we can insure in our industrial concerns that the big overhead charges are going to be distributed over 24 hours, rather than six or eight hours, then, aided by the system of standardisation, we are going to get the cheapest possible turnout of our materials. It is for the public to say whether the recommendations have sufficient merit.

I hold that in the Commonwealth of Australia, professional men do not bear their fair share of the responsibility of public life. It is one thing for our professional men to meet together in a congenial atmosphere, and, after due deliberation, decide what recommendations they will make, but if more of the members of our trained bodies and professions would take their legitimate share in public life, they could then function in a sphere where they would have a vote as well, and where that vote would help very materially in the consummation of the standards we wish to lay down.

Our Railways are a glaring example of want of standardisation. We have no public men in the community fit to tackle this question. Instead of attempting to get a uniform standard, the Commonwealth is laying down, and has laid down, a small section of railway of a different gauge to any in operation in Australia. Right through the Commonwealth we should have one standard of broad gauge, and one standard for light railways. We cannot afford to lay down standard railways in opening up new country. We should lay down light railways and feed the bigger ones.

While it is a very laudable thing that we should have these Committees at work in Australia, we have got to go much further afield, and the work must be co-ordinated with similar committees in other parts of the world. I have stressed the point that those who have talent and means should devote more time to public affairs. We might then get further ahead than we are to-day. People outside are ready to criticise and offer advice, but cannot back it up, whereas, in Parliament, a man has not only his own vote, but can often influence other men. We want to standardise our public men.

I think we owe a great deal of gratitude to our lecturers to-night.

MR. SCOTT: I have listened with great interest to what the three lecturers have said. When I came here to-night I thought their ideas could hardly be applied to our particular profession. For many a day I have wondered how it is that the "spec." builder beats us. I now know the secret. He beats the architect every time, because he standardises everything he puts into his places. He will put in 150 frames, all exactly alike.

Mr. Nangle said the architects were inclined to think the work they did was excellent. We all know the mistakes we make. One thing that tends to standardisation in the building of our houses is the utility of the article. Take a window fastener—a very simple thing, useful, efficient, and economical—I think they call it the "Simplex." Here is a glorious opportunity for engineers to establish a standard. There are dozens of gate latches on the market, and not one any good. If a really good one were made, it would standardise itself. Many other things like that would soon establish themselves by their utility, because we have so many worthless articles that we are often at our wits' end to find a good one.

I quite agree with this Association in its endeavours to standardise as much as possible, and I congratulate its members, and wish them every success in their efforts.

MR. MOULD: Like Mr. Scott, I really did not know how the lecturers would deal with this subject in relation to architecture, but there seems no doubt whatever that there must be quite a number of lines, particularly with regard to engineering, at any rate, where the recognition of the principle of standardisation will entail a great saving, and be necessarily a benefit to the community. On the other hand, the remark made by Mr. Scott appeals to me very much, when he referred to the fact that when an article comes into being, which is of supreme importance and value, it makes its own standard by creating its own market.

I do not quite know what the function of this Committee will be. I do think that if we are going to have a more rigid organisation, by which this or that article will be standardised by Act of Parliament, we may really retard progress, instead of allowing individual development along certain lines. With regard to the standardisation of houses, I wonder how much we would actually save by standardising. We would, perhaps, produce the intolerance of an awful uniformity which would be seen everywhere. Regarding architecture, I do not think the saving would be much, and I do not think it would be a good thing to introduce it as a general principle. Reference has been made to Ford and his works. Here is a man who has the reputation of being one of our great world philanthropists, and yet a man who ranks as the wealthiest in the world. His philanthropy consists in his having built up an immense organisation at vast profit to himself, which has produced a type of person who is little more than an automaton, who learns his trade in a couple of days.

While I think this Committee would do well to standardise many things, the metric system, for example, there are a great many ways whereby we might run into error. It is not always the best to turn out the cheapest thing. As long as the architect is trying to be what we call individualistic, or clever, he is doing little good and making slight progress. When his ideas co-ordinate with the general ideas of his brothers in one certain direction, then the whole community benefits.

Along general lines, I congratulate the lecturers on the excellent papers they have read.

MR. ROBERTS: I heartily support the lecturers, who have put up a good case to us for advocating standardisation. Evidently their point was just to show the necessity for standardisation. I was on a Standardisation Committee for this Institute less than a quarter of a century ago, when we produced a unanimous report which was adopted by the Association and the Master Builders, and is the standard to-day. There are many difficulties in the way of bringing out standards, which are not fully appreciated by the majority of members. I think a Standing Committee should be formed, to which suggestions could be made, and which could gradually collect the various ideas and work up a standard.

Mr. Nangle mentioned that the majority of buildings were put up without the assistance of architects, but to say that architecture has not had any influence on them is quite another thing. The standardisation advocated is a grand idea, and I heartily support it.

MR. BUCHANAN: I have great pleasure in supporting the remarks which have been passed. If the Engineers' Association is asking for the support of this Institute, I think they should get it whole-heartedly. If this Association has been formed with the objects in view which have been outlined here to-night, there ought not to be any doubt about our supporting it. Sir Charles has mentioned about the necessity of more professional men going into public life. If, however, we cannot attain these high positions, we might do as the Fire Underwriters have done in America. They have what they call a Standard Association and a Standard Laboratory, in which all these particular standards are tested and labelled. Once the article bears the label of the laboratory, it does not require any parliamentary support.

MR. N. L. JONES: I think it is time we did something along the lines that have been indicated. A lot could be done to standardise materials used on buildings. Mr. Nangle has pointed out the scope there is in that direction. Why should bricks vary in size from 9in. to 9¾in? Then hardwood timber is quoted at 6 x 2 sizes at per 100 feet lineal, and the fractional sizes are quoted super. I am fully in accord with the idea of the standardisation of materials. We can do this in many ways without making the buildings look all alike, although it might perhaps be better to standardise many of the cottages.

MR. MUNNINGS: I have listened with great interest to what has been said by the lecturers. When I first came here I was doubtful about the lines they would take, but I found that I could not pick on a single point with which I was in disagreement. They have confined their ideas of standards to those phases of construction of machinery and so forth that may be considered practicable, and they have not ventured into the realms where standardisation would be undesirable. I think standards of locks and sanitary fittings, and various other details in connection with buildings are possible and desirable. With regard to windows I am not quite so sure. The function of the window is not only to let in air and light, but also to be a thing of beauty.

I hope this Institute will be able to support the Committee, because undoubtedly the time is ripe for a move in that direction whereby elements of constructional form which will not interfere with the higher intellectual and spiritual development of man may be made.

MR. DAY: I was surprised at the trend of thought of the lecturers. I did think Mr. Nangle would have known that the Institute already has a committee which has dealt with standards, particularly of doors and architraves. One of Mr. Nangle's own pupils has already designed a catalogue for one of our merchants. We have no fault to find with standardisation from that point of view, but what we do fault is the beastly designs we find in catalogues now. You find very few decently-designed architraves or doors. Take Burdekin House. Nobody can fault the dear old box-frames there. The difficulty is that firms like Hudson's have already laid down certain machinery, and it is, therefore, hard to get new designs introduced. We cannot improve on some of the old-fashioned doors and architraves designed many years ago. The old iron columns of Lyon's Terrace were standards, but we cannot get them now—the moulds have been smashed.

I have much pleasure in supporting the remarks of the previous speakers.

(The Chairman conveyed the hearty thanks of the meeting to the speakers.)

MR. NANGLE: We ought to feel pleased at the interest members have taken in our remarks. What I believe is actually the object in view is to secure the active support of this Institute, and to get its adequate representation in panels that may be formed. Arrangements are made so that every interest involved will have an opportunity of being heard and considered. The decision that will be arrived at will probably be a compromise, and consequently ought to be the best thing to do. I do not propose to standardise buildings, but only the parts of the buildings. I am a tremendous admirer of the standardised forms of the Greeks in Art. We cannot afford to neglect those standardisations. There is not sufficient relationship between the parts in one thing and the parts in another. There ought to be some relation between a window and the possible furnishings of that window.

I think, on the whole, I should say that the members of the Institute present have formed the opinion that the proposal ought to be supported. This Institute should be represented very actively on many of the panels. Finally, I would like to say that I am pleased at the wide view you have taken of the ideas. I would like to support our President in what he said about professional men taking a more active part in public life. I would like to compliment him on the good example he sets us. Gentlemen, I thank you on behalf of my colleagues and myself.

"Shanty by the Swamp," woodcut by Mr. R. Davies.

INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES ORDINARY GENERAL MEETING

4th AUGUST, 1924

THE PRESIDENT (SIR CHARLES ROSENTHAL) was in the Chair.

MR. DAY (Hon. Secretary) announced that apologies has been received from Messrs. Anderson, Mills, Hadley, Peddle, and Colonel Vernon.

THE MINUTES of last meeting were confirmed.

THE CHAIRMAN announced that at the next Meeting, to be held on Monday, 1st September, 1924, Mr. Frank Walker would deliver a Lecture on "Australian History." Sir Charles Rosenthal urged that members would take advantage of the privilege they had of bringing their friends to these lectures, thereby giving them a wider effect.

GENERAL BUSINESS.

THE CHAIRMAN:
Last Meeting you were informed that the Council had decided to request the Secretary of the Federal Advisory Board to extend the date for the receipt of competitive drawings for the new Administrative Buildings at Canberra. I think the request was for an extension of three months. That would have taken us over the New Year into January, 1925. Professor Wilkinson was instructed to confer with the Council, and he did so, and after discussion, the Council decided to hold out for a definite extension. We have now received advice that the Committee has decided to extend the date for one month. The closing date now is the 31st October of this year.

You will remember that recently the Institute was invited to nominate delegates to attend the Science Congress in Adelaide, commencing next month. I was selected as one, and the other delegate was to be chosen later. I hope we shall get Professor Wilkinson to go. It was my intention to have given a paper on Forestry, matters, because I think we are doing too little in this respect. Dealing with it from the architect's point of view, I might have been able to add something of interest to the discussion. We received advice, however, from Adelaide that the agenda paper, as far as Forestry is concerned, is overcrowded. It was pointed out, however, that while the Engineering Section was quite full, the architectural side was not, and I suppose, therefore, that the least we can do is to give an architectural paper. Professor Wilkinson says he is going over for a holiday, but I think we will be able to persuade him to give a paper, particularly as he is the Professor of Architecture at our University.

A MEMBER:
I have not received the Journal for a matter of about six months. I was wondering whether it was *non est.*

THE CHAIRMAN:
I thought every member was aware that our agreement with the late publishers expired at the end of the year, and a committee, with Mr. Waterhouse at its head, has been responsible for the issue of a new publication under a new agreement entirely. The first issue (June and July) is now available, and contains the addresses given by Mr. Stanley on the 8th April and by Mr. Weekes on the 13th May. We are hopeful that from now on the Journal will take a more useful form.

I had hoped that we might have had a report from the sub-committee appointed recently to consider the amendment of our Constitution making it possible to amalgamate the activities of the Architects' Association with those of the Institute. A move has already been made in the direction of, perhaps I may say, absorbing the Architects' Association, it being felt that under registration, all men who are qualified have now a common ground in registration, and it was considered that there was not room for the two bodies. The sub-committee was therefore appointed to make the necessary alterations in our Constitution affecting membership, fees, etc., so that it would be acceptable to the members of the Architects' Association who may join with us. Messrs. Peddle, Waterhouse and Harris were the members of that sub-committee. I am most anxious that we shall not reach the end of the year without this union being achieved.

MR. BUCHANAN:
Is there any supervision, or any chance of error occurring in the printing of the contract agreement for conditions adopted by the Institute of Architects and Master Builders? Two items have come under my notice recently. One is that the agreement does not bring in the word "materials" in making valuations of work executed. I have always understood that work executed and materials on the site were to be taken into the valuation. The word "materials" is not in the clause. That is one point. Then further on, it states "that the builder can go direct to the client for his certificate without reference to the Architect at all." I do not know whether these omissions are by intent or by mistake, but I think it would be just as well if those conditions were perused carefully by the Committee in charge. They may be errors in printing. It is bad business if a builder can go direct to a client and not get his final certificate from the architect.

THE CHAIRMAN:
I think it is obvious that "materials" should be included, and also that no builder can get his final payment without a certificate from the architect.

I think that at our last meeting, or one held recently, the question of protecting a client from the actual tradesmen who may be employed on weekly wages was discussed, the matter being first raised by one of our members. If, under present arrangements a contractor fails to pay his workmen, and receives his payment from the proprietor, the law provides that the owner is liable. In order to safeguard ourselves and our clients, we referred the matter to Mr. E. P. Simpson, our Solicitor, who ruled that it would be necessary to have printed on our certificates the form: "That the contractor, when signing his receipt to the proprietor for money received, certifies that he has paid all wages involved in connection with that particular work." If that certificate is provided, the onus is then on the builder, and the proprietor is relieved. The Master Builders recently took exception to this clause, and pointed out that they had no intention of defrauding their weekly workmen, and they rather asked that it be withdrawn, and their Secretary has written us to that effect. We discussed it at out Council meeting to-day, and decided that we are simply carrying out the recommendations of our Solicitor, and we so informed Mr. Peter Beddie, the President of the Master Builders. That body is getting legal opinion also. The whole point is simply to insure that the client is protected.

MR. ROBERTS:
Have any steps been taken yet in the direction of bringing all registered Architects into the Institute? It was suggested at the Dinner.

THE CHAIRMAN:
The Council felt that the first thing to do was to insure the absorption of the Architects' Association, and when that had been accomplished we would be able to show a united front, and invite outside men who are registered Architects, but not members of the Institute, to join up. The Architects' Association is submitting the proposal to its members, and we must do the same.

MR. SCOTT:
I do not quite like the idea of the Institute of Architects pressing all registered Architects to become members of the Institute, because we understand that there are a good many whom it would not be desirous to have as members. I think if we press or encourage too many of them to join, we may be making a mistake. We will have to draw a clear line between those we want and those we do not want, because I can assure you that there will be many registered whom we will not want. The difficulty is that Registration accepts a man who has been practising for a certain number of years. I do not like to see too keen a desire on the part of the Institute to enrol members.

THE CHAIRMAN:
The intention was that all registered Architects were considered to be qualified, it being recognised that some of them, under ordinary circumstances, would not have been recognised; but there must be a commencing point somewhere. The Institute will, however, exercise its own right as to whether it admits men, who, not for architectural but for other reasons, may not be desirable. No matter how capable an architect may be, that does not mean that he will automatically be admitted a member of this Institute. The proposal is that every one of us voluntarily relinquish our present title, and that we should all come in under the one designation of member, and that thereafter the Institute should decide from among the members those who are eligible for other ranks, it having yet to be decided what those grades will be, whether we will stick to the terms, "Fellow," "Associate," etc., or just retain the term "Member." The Association is prepared to come in with us, bringing its funds and its library. We on our part will have to lower our subscription to £2/2/-, and also reduce our status to that of "Member." Of course, we have to have your confirmation of these proposals before they can be carried into effect.

MR. DAY:
In reply to the point raised by Mr. Buchanan, I have here a printed form of contract. I may say that the builder may put cement and other material on the ground. If he puts material on the site, and then takes it away again, the owner would presumably pay for it. That would be the position if the word "Materials" was in the clause.

MR. MILNER STEPHEN was present and was to have given a Lecture on "Some Impressions of Travel." Owing, however, to the lantern operator not being in attendance, it was impossible to show the views, and it was decided to postpone the Lecture until the next meeting, 1st September, when Mr. Stephen agreed to give it prior to the address by Mr. Walker.

In tendering apologies to Mr. Stephen, Sir Charles Rosenthal said that the only redeeming feature about the matter was that there would be a much larger audience at the next meeting.

INCOME AND EXPENDITURE ACCOUNT, JANUARY 1st till DECEMBER 31st, 1923.

To:—		
Balances		£587 8 0
Fees	£20 16 0	
Subscriptions	597 0 6	
Federal Levy	36 8 0	
Education Levy	41 12 6	
		695 17 0
Agreement Sales		63 8 0
Profit on Exhibition		7 6 3
Visit to Canberra		91 15 6
Messrs. Joseland & Gilling's Furniture Account		25 0 0
Miscellaneous Receipts		235 19 8
		£1,706 14 5

By:—	
Rent and Cleaning	£216 1 10
Salaries	273 0 5
Agreement Purchases	23 5 8
Furniture	266 12 8
Petty Cash	49 12 7
Telephone	13 15 6
Printing and Stationery	103 11 9
Federal Council	35 0 0
Endowment Fund	45 0 0
Visit to Canberra	84 0 0
Miscellaneous Payments	302 16 11
Balances	293 17 1
	£1,706 14 5

EXPLANATORY NOTE.

Balances, 31/12/'22	£551 3 6
Less 1922 Accounts not paid	288 6 5
	262 17 1
	£262 17 1

Balances 31/12/'23	£242 7 7
Royalty on Agreements	60 4 0
	302 11 7
Less 1923 Accounts not paid	47 18 4
	254 13 3
Loss in 1923	8 3 10
	£262 17 1

BALANCE SHEET.
31st DECEMBER, 1923.

Liabilities.	
Education Fund	£96 11 6
Endowment Fund	51 9 6
Entrance and Examination Fees	16 3 6
Sundry Creditors	98 19 4
Balance, being excess of Assets over Liabilities	481 15 7
	£744 19 5

Assets.	
Bank Balances	£293 17 1
Furniture and Fittings	342 8 6
Library	100 0 0
Agreement Forms	4 13 4
Sundry Debtors	4 0 6
	£744 19 5

(*Signed*) JAMES PEDDLE, *Honorary Treasurer.*

We have examined the Statement and Balance Sheet and hereby certify that these are correct as shown by pass books, cheque butts, etc.

(*Signed*) GEO. W. DURRELL, }
G. L. GRANT, } *Auditors.*

ARCHITECTURE

THE JOURNAL OF PROCEEDINGS OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Vol. 13. No. 9.

Registered at the G.P.O., Sydney, for transmission by post as a newspaper.

September, 1924

EDITORIAL

THERE is no more reliable barometer of a country's progress than the literature of its people, and in Australia, recent years have given evidence of a more genuine appreciation of those works devoted to subjects of general interest than was previously the case. This is particularly noticeable with regard to magazines and serial publications dealing with the various Arts and Sciences, and problems, connected with the home and its surroundings.

The thinking sections of the community—men and women, alike—are taking a far greater interest, not only in the design of their homes and gardens, but also in the multifarious aspects of Civic Life, both sociological and aesthetic.

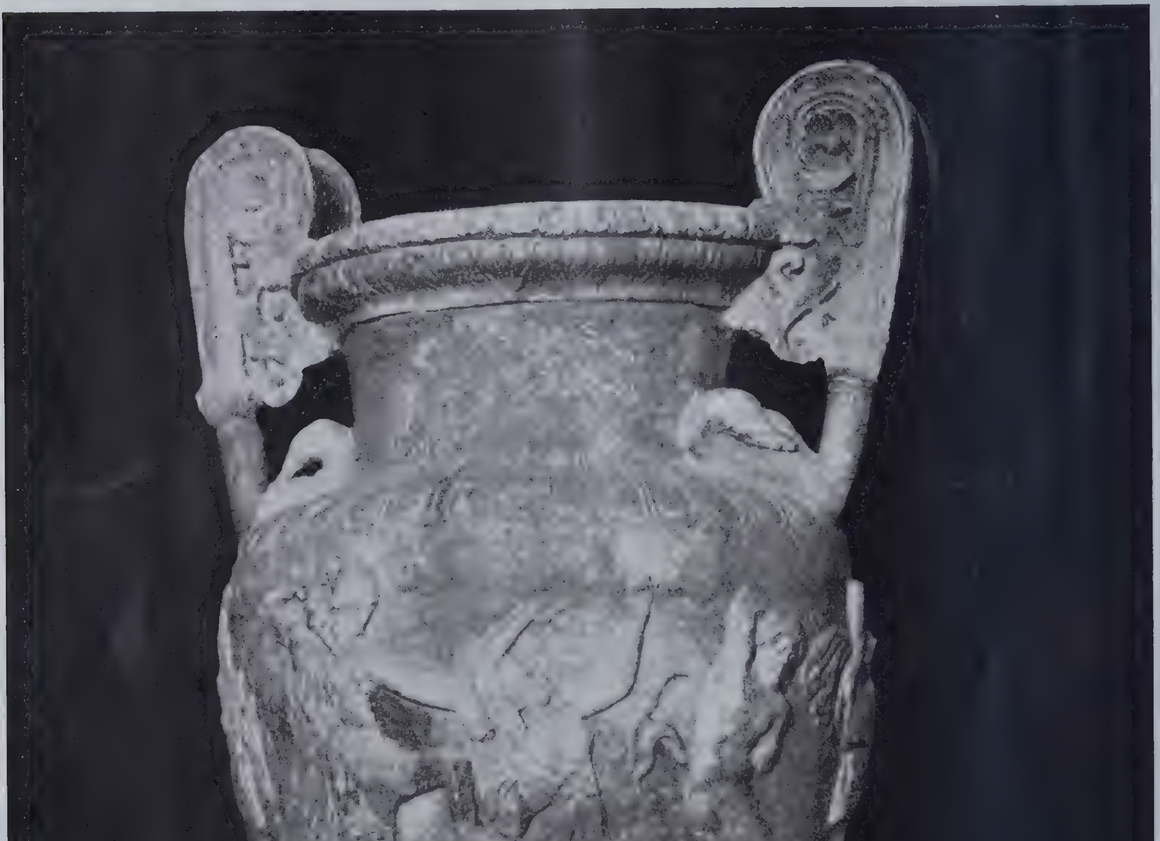
One inevitable result of this trend is an appreciation of the fact that usefulness and beauty, far from being incompatible are essential counterparts of one whole, and that unsightliness is by no means an indication of utility.

Another far-reaching result of this wider knowledge is the realisation of the interdependence of the various forms and functions of our lives and surroundings. We no longer think of the house as distinct from its garden, nor of the furnishing as separate from the house, but realise that each is affected by and must be considered in relation to the others.

These facts have for some time been established in other countries and the ever-increasing demand here for articles dealing with building, decoration, gardens and furniture points to the need of an Australian publication on similar lines. With the hope of fulfilling this want The Institute of Architects of N.S.W. determined to alter the policy of its journal "Architecture" and to arrange for the Quarterly numbers to be wider in their scope, and to embrace not only Architecture but the Allied Arts.

One important factor was that of selecting a Publisher and in this respect The Institute considers itself fortunate in having secured the co-operation of "Art in Australia" (whose influence on the appreciation of Art in this country is too well known to require comment).

The Editors therefore take pride in introducing this First Quarterly publication of "Architecture," trusting that it will fill a useful function in interesting a large section of readers.



ANCIENT VASE FROM VATICAN MUSEUM.

INDICATING THE VALUE OF A SIMPLE ROOF.

TIME HAS MELLOWED THE BRICKS, SHINGLE TILES AND TIMBER TO A CHARMING TEXTURE.

NOTES ON DOMESTIC ARCHITECTURE

By B. J. WATERHOUSE

AMIDST the varied practice of an Architect, the design and construction of a home affords him, perhaps, the greatest—although not unmixed—pleasure as he is then directly in touch with a most important event in the life of his client. Collectively we take an indifferent interest in the civic development of our towns and the planning of our cities, but to the home-building individual the most important factor of his scheme of existence is under consideration; and the Architect, who would prefer to be left in quietude to consider the problem, must perforce listen and apparently take voluminous notes of his client's desires, which usually vaguely define actual requirements—but consist largely of the ideas of his wife or fiancee who has, in anticipation of this auspicious occasion, been for a considerable time collecting data from friends who have, or hope to enter, upon the exciting venture of home building. All these impossible oddments (usually relative to the size of the china cupboard and the colour of the walls) are deposited with due formality in the custody of the Architect, for his guidance, but rarely do they indicate a solution of the problem.

The delightful part of one's work then begins, a preliminary sketch (promised in a few days—but usually ready in a month or a little less), and one cannot afford to be deprived of this preliminary ramble or to hurry over it because in so many instances it is all one obtains for one's efforts.

If the would-be client survives the shock of the estimated cost, events may develop further, and provided some sympathy exists on the Architect's side, and flexibility on the client's, a really pleasant time is in store for both. Seriously—let it be remembered that it is the duty of the Architect to materialise the client's wishes, and firstly to visualise the intended home to the utmost extent, and experience proves that the faculty to picture the result even with the help of elaborate sketches is most difficult for the average client, but a model ofttimes overcomes all obstacles. Drawings frequently add to the mental confusion because the approach to the subject began wrongly—the collecting of scrappy ideas of this and that house seen, admired, and discussed with various owners, instead of at once securing the help and advice of a qualified Architect. These hazy preconceived ideas are the bugbear of every Architect whose first effort must be to remove some of the mental mists which have gathered—in fact educate the client in what is really desirable and suitable to his requirements. An Architect is expected to be a strange compendium of knowledge; as Mr. Filson Young once remarked: "The Architect seems to be in a very difficult position, we demand from him the imagination of an artist, the precision of an engineer, and the commercial acumen of a cotton broker. He is expected to be poetical about gables and practical about drain pipes."

Perhaps the really important part of domestic architecture is planning, and it is regrettable that so many houses are daily constructed without due consideration of this important factor.

It should be scarcely necessary to direct the attention of those engaged in the study of architec-

RRATUM—*The inscriptions beneath photographs on page 3 should be transposed.*

ture to that aspect of the question, but the hurry to proceed with elevational matters is a pitfall to even the experienced. Isaac Ware, in an old book of precise directions, quaintly remarks:—

"Having considered the structure of the outside of the building we shall decide its inner division into rooms."

The development of the plan, of course, must go hand in hand with the exterior.

In all successful home designs the plan will be found to be not only convenient, with its rooms disposed to the best advantage for the respective uses, but far greater qualities must be observed, such as variety, proportion, interest, charm and cohesion.

To an Architect a fine plan possesses an inspiring beauty and elevational treatment; in every good design must reflect the plan.

As Architects we do not in Australia impress this upon our clients and the public sufficiently, and in fact frequently indicate by our illustrations in magazines the pictorial side of building only.

The public is freely supplied with magazines containing designs for homes which, in the majority of instances, are unsuited to our requirements or climatic conditions, rendering it imperative that an effort should be made to put before the public better and more suitable ideas because it must be remembered that only a small proportion of homes are erected under the guidance of an Architect.

The day of the small house is more than ever present, and it is the duty of those engaged in such design to regard the plan as the most important part of the service to the client, for upon a satisfactory solution the convenience and comfort of the home depend.

Good planning and appropriate elevational treatment are essential; and of equal importance is setting, aspect and prospect, and deserving of intense consideration, as they materially influence the plan—in fact are fundamental. Harmony between the landscape and the house is vitally important from the standpoint of the exterior.

Perhaps there is no more obvious defect in many of our houses (except perhaps the unfortunate habit of slavishly facing a dusty or uninteresting highway) than this indifference to a due observance of the setting, and the cardinal points; the outcome frequently of adopting a plan prepared for a totally different site. Advice upon this point is unfortunately not usually available when an Architect is not employed, and it is becoming of great urgency that some means should be found of disseminating accurate knowledge of these essentials to those who are unable to consult an Architect in the ordinary way. It is of national importance that homes should be constructed on sound, convenient and beautiful lines, and the building of such should be encouraged by every means both for the sake of the community and the individual.

"The interest created by the possession of a home tends to make the owner a better citizen, and to encourage an intelligent concern for equitable law and government and the wise administration of local affairs."

To the Architect the plan must be of principal concern, but the client and the passer-by is attracted first, undoubtedly, by the general external appearance of the building, and it is also of great interest to the designer. Indifferent as so much of our planning is, what must be said of the outside appearance?

Many speculative builders and untrained architects mistake eccentricity for character and oddity for architectural value, therefore with a few exceptions, the general result has been, up to the present time, that comparatively little of real interest or value has been produced.

To all who care for the progress of modern domestic architecture in Australia this is a sad reflection, but "hope springs eternal" and it is safe to anticipate great and permanent improvement under the guidance and instructions given to our budding Architects at our School of Architecture and Technical College, and also to the efforts of those Architects who have just completed their studies and travels and have commenced practice.

The best specimens of modern domestic architecture would have been impossible without close study and observation of old types. A knowledge and acquaintance with the periods of building that have passed and the phases of thought that produced them is eminently desirable. Such study is not pursued with the idea of reproducing a house in the style of any past period, but rather to develop an intelligent enthusiasm and a desire to create designs climatically suitable and in harmony with the spirit of our own times. Appreciation of the traditions of past development, a realisation that the domestic architecture of the past fitted the needs of the people and was typical of them alone. should save us from the slavish adherence to forms which are not an expression of ourselves. Study of the best work of the past clearly demonstrates that efforts were directed to overcome the problems of construction in a sound and beautiful manner than in conscious striving after style (omitting of course so-called revivals). There was one style, and that of the moment, supported by efficient craftsmen handing down the traditions of building generation after generation. Builders were very much helped by the fine race of crafts-

UNPRETENTIOUS, DIGNIFIED AND REPOSEFUL

men; the joinery was excellent; the plaster work had great beauty, and the detail of the ironwork and carving was excellent.

The history of architecture has, in the main, been a record of constructive problems bravely faced and carried to a pleasing finality.

Is it possible to analyse with any degree of success those subtle qualities which tend to make the home wholly charming and satisfying?

Such qualities are elusive, but close observation will reveal some which may be enumerated, viz., proportion, colour, scale, rhythm, texture, and above all repose; indeed if any one quality is essential to the development of a satisfactory and distinctive result it is that quality of primary importance—repose.

A satisfactory elevational effect is obtained firstly by its outline or silhouette; secondly, harmony with its setting, and thirdly, its details. No feature contributes more to the success of the first than a dignified and simple treatment of the roof. If there is a good outline, pleasant relation of parts, and simplicity of detail, repose should result.

Proportion, scale and rhythm are qualities which almost defy definition, but the trained eye sees them and the effort of the designer is to produce these. Colour is equally important, and requires close study to avoid combinations which are harsh in Australia's bright sunlight, and to give just the requisite value to mouldings and projections.

Texture as a quality of architecture is a fascinating subject and well worthy of close study. It is a condition of material surface, but is not anything definite in form or colour.

It has been described as "a magical garment when well woven, throwing over bricks and stone a veil which softens their outline, half concealing and adding mystery and poetry to beauty."

William Morris' description of the Old Castle in "Golden Wings" describes beautifully local colour and texture.

"Many scarlet bricks there were
In its walls, and old grey stone;
Over which red apples shone
At the right time of the year.

On the bricks the green moss grew
Yellow lichen on the stone,
Over which red apples shone;
Little war that castle knew.

Deep green water filled the moat,
Each side had a red brick lip
Green and mossy with drip
Of dew and rain.

The passion of our time seems to be for neatness and smoothness. The average man likes a neat piece of walling of tuck-pointed brickwork, or uniform coursed stone work, plaster work trowelled to a perfect plane of smoothness and polish. All these are devoid of texture and produce irritating self-consciousness fatal to success.

Repose should result in that sense of homeliness without which the house is a lamentable failure. This is the pre-eminent characteristic of the best English and American homes. E. V. Lucas says in one of his charming rambles:

"It is generally agreed that the English house comes nearer to the idea of home than that of any other people. The memory of friendly houses, modern and Georgian, and of even earlier date in various parts of England rise before me; houses over which the spirit of welcome broods, and within which are abundant fires and lavender-scented sheets, and radiant, almost laughing cleanliness, and that sense of quiet, efficient order that is perhaps not the least charming characteristic of the English country house."

The enthusiastic student is ever studying these elusive and mystical qualities which constitute a delightful relaxation from the more prosaic duties of office routine, and in no branch of architectural work do opportunities occur more frequently than in domestic buildings.

The Architect must observe the great traditions of his craft, and avoid on the one hand the dangerous paths of slavish reproduction, and, on the other, a striving for novelty so frequently resulting in eccentricity. New materials and methods of construction will be examined and adapted for use as occasion requires, and the endeavour will be made to clothe each in appropriate fashion.

Old traditions have been completely broken up. The control of the architect is essential over every part of the design, and he is looked to by the workmen for direction in every detail of every trade, and the impress of their own fancy, which conduced to so much interesting building in other times no longer dominates the character of the work. It also makes house design more stereotyped and uniform, deprived of that accidental and human interest which the freedom of older methods encouraged.

We all hope for opportunity to demonstrate our knowledge and skill upon the more important architectural monuments of our time, and such desire is justifiable and is an incentive to effort. It would be unwise, however, to regard the study of domestic architecture as of secondary importance—it is of first rate importance in every community, and worthy of profound study.

Norman Shaw has aptly said:—

"The house is the background to those daily scenes from the drama of household life which are acted within the dwelling rooms."

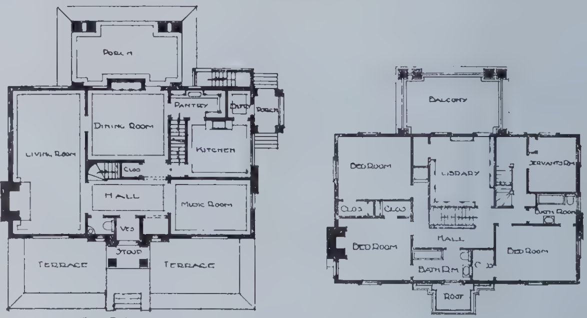
To attain the ideal house, and each room in the house as a personal creation and form of self expression, a close study of the language of colour, form, line, and texture is essential, and if these essentials are sympathetically considered, the resultant should be a structure which, in the truest and fullest sense of the word may be designated home.

In the successful home a great deal more is involved than merely providing a beautiful, healthy and comfortable place of residence. "A house should be the criterion of a man's taste, the visible response to his instinctive call for beauty. It furnishes the environment in which are born and nurtured the early impressions of those who are to set the taste standards in the generations that follow."

We are realising more fully the power of environment as an educational factor in our generation, and the house appears to the thinking man as a necessary environment for mental comfort and natural growth. The home is the soul of environment. "Is is in the home that the child first sees colours, hears sounds, touches textures. A beautiful home should not be regarded as a luxury, but as a duty to the cause of civilisation as well as a response to the normal desire by the aesthetic sense."

Mr. W. G. Newton says:—

"Beauty adds nothing to the cost of a house, it is merely a right admixture of the elements at hand. The beautiful house is also a thoroughly efficient house, where as little waste labour as possible is incurred; where fires start with a tap, and the lights with a switch; where floors and partitions do not harbour dirt; where windows open, passages are airy, and the front door suggests a welcome." A point of great importance is the quality of the building, and this should be first-class.



FIRST FLOOR PLAN. SECOND FLOOR PLAN

A GOOD PLAN SHOWING COMPACTNESS, CONVENIENCE AND SYMMETRY.

The idea that a house erected at the lowest possible cost was economical is quite erroneous. The test of economy is the durability of the structure, and the cost of maintenance should be reduced to a minimum by sound initial construction and a careful selection of material.

As Swift pertinently suggests—

"A prudent builder should forecast
How long the stuff is like to last;
And carefully observe the ground,
To build on some foundation sound.
What house, when its materials crumble,
Must not inevitably tumble?
What edifice can long endure,
Raised on a basis insecure?
Rash mortals, ere you take a wife
Contrive your pile to last a life."

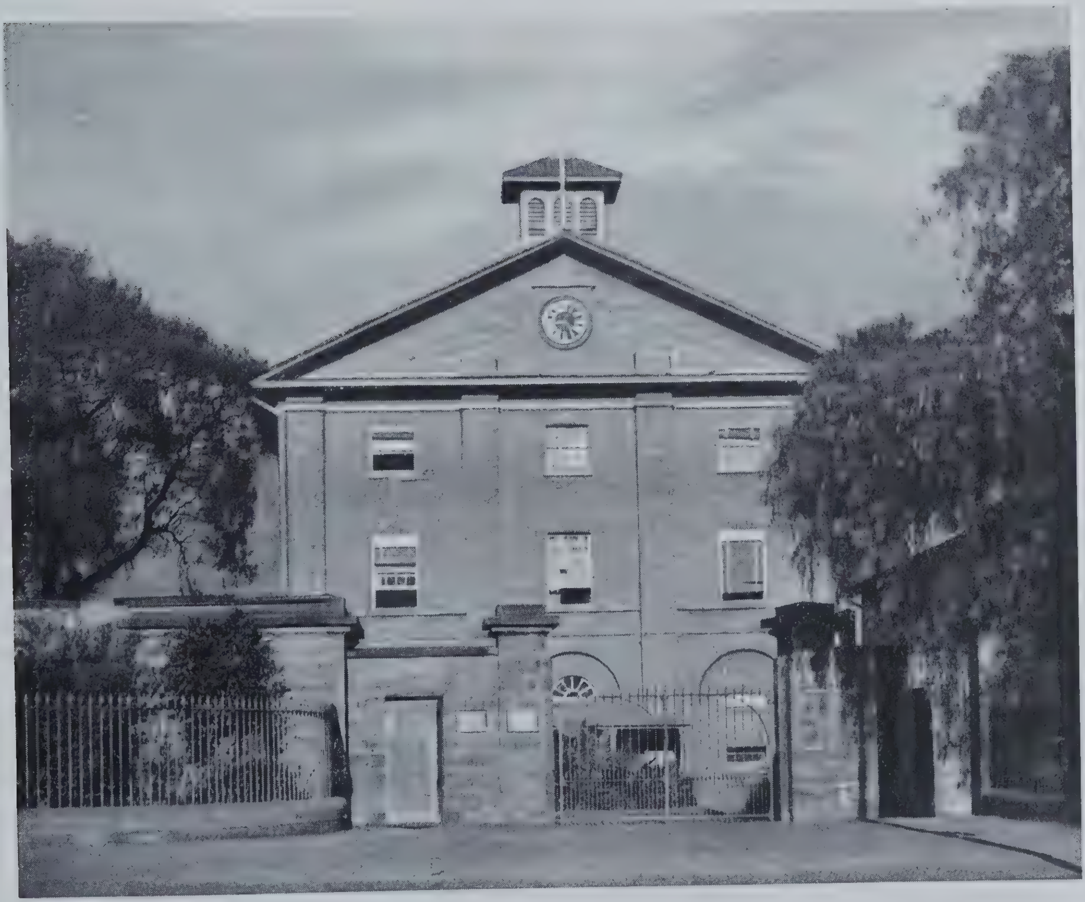
Another very important matter deserves attention—that is, the necessity for some collaboration between Architects, where opportunity occurs, particularly in new subdivisions. All too frequently admirable designs are rendered partially ineffective, and robbed of their beauty by the inconsiderate methods of Architects who appear to have no respect for brother professionals' designs and setting.

It is not desirable for all houses to be alike, but it is regrettable that a little more attention is not given to group design, which would tend to greater simplicity and a serenity would result, only obtainable by such sympathetic collaboration. All too often many houses in a group render the melody at fortissimo with deafening insistence, and ruin the adjoining quieter elements.

We owe a duty to our neighbours. In one of the grown-up digressions in 'Water Babies' Chas. Kingsley says, that the beauty of the house opposite is of more consequence than that of the house one lives in, because one rarely sees the house one is in, but is always conscious of the other."

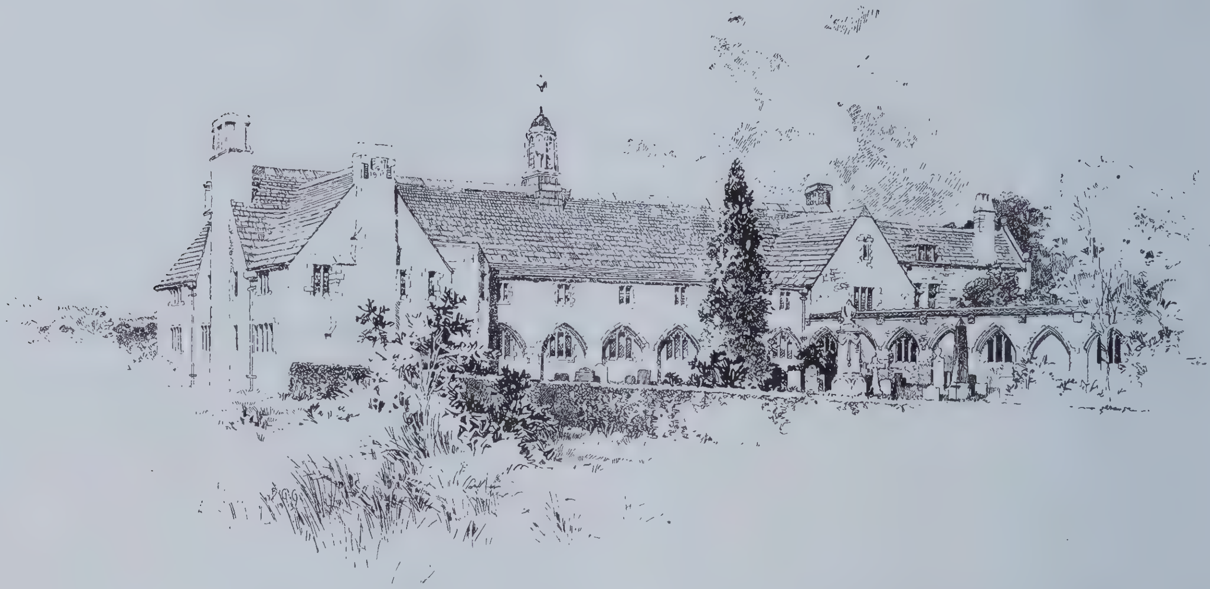
The saddest result of our utter lack of common sense in the preservation and development of the beautiful is demonstrated on the foreshores of Shell Cove and Cremorne—until comparatively recently occupied as a single house building area, and now numerous homes with much charm and beauty of setting have been utterly ruined by the erection of barrack-like flats, without any consideration for the owners of residences who have spent large sums upon houses and gardens. Municipal Regulations suitable for governing the erection of residences are certainly not applicable when three and four-storied flats are under consideration in areas already largely residential. These are matters deserving of urgent attention by every Architect who has any interest in domestic architecture.

Already irreparable harm has been done to the beauty of our foreshores and many homes thereon. If these matters do not receive the immediate consideration of architects interested in domestic architecture that phase of our work which we are so anxious to develop to perfect fitness and beauty, will be seriously handicapped, clients will be discouraged and progress so ardently desired, retarded, if not irrevocably jeopardised.



Cazneaux—Photo. HYDE PARK BARRACKS. FRANCIS GREENWAY, ARCHITECT.

A BEAUTIFUL BUILDING INTENDED FOR DEMOLITION.
EVERY EFFORT SHOULD BE MADE TO PREVENT THIS ACT OF VANDALISM.



THE PARISH HOUSE, SAINT PETER'S, MORRISTOWN, NEW JERSEY.

BERTRAM GROSVENOR GOODHUE

BERTRAM GROSVENOR GOODHUE.

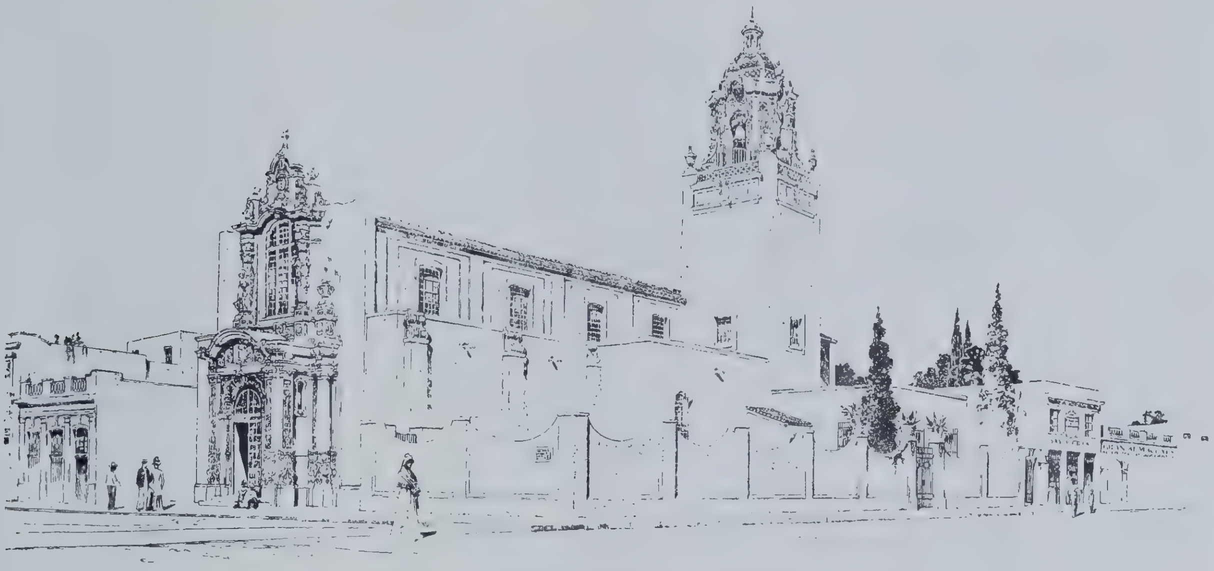
AN APPRECIATION BY JOHN D. MOORE

IN the year 1924 the pages of history recorded the death of a great American Architect, a man of strong original thought with the power and the opportunities to express his ideals in the various materials, which, when fashioned and assembled, form the completed building.

This man was Bertram Grosvenor Goodhue who, in pursuing his individual Architectural beliefs, gave to America and to the world the masterpieces that his brain conceived. His works reveal the great and lovable personality of a man whose life was devoted to creative effort.

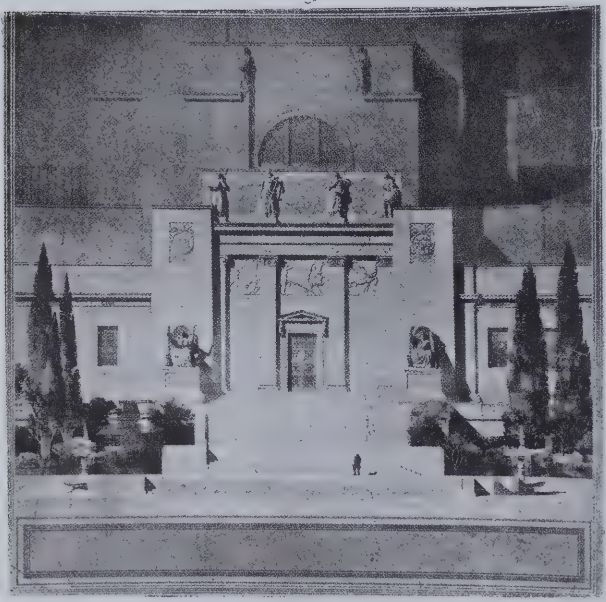
Goodhue spent many years of his early life travelling, and absorbing the artistic treasures that the world offers the student. He was greatly influenced by the spirit of the mediaeval architecture that he saw in Europe, and the charm and vitality of the buildings of colonial Spain in Mexico, so that in later years he was able to recreate the soul of the work he had studied and to make it live again. He was no mere copyist, content to repeat the forms of the past, but a creator bringing new vigour and his own personality into the styles that he used.

Not only was Goodhue a great Architect, but he was recognised as one of America's foremost designers of types, bookplates and page decorations. To these capabilities must be added that of the delineation of Architectural subjects in pen and ink. Using a definite but fine and sensitive line, he expressed very faithfully the individual textures of



·LA SANTISIMA TRINIDAD, EPISCOPAL PRO-CATHEDRAL, HAVANA

WINNING DESIGN FOR NEBRASKA STATE CAPITOL, LINCOLN, NEB.
GOODHUE, ARCHITECT.



ENTRANCE—WINNING DESIGN FOR NEBRASKA STATE CAPITOL
GOODHUE, ARCHITECT.

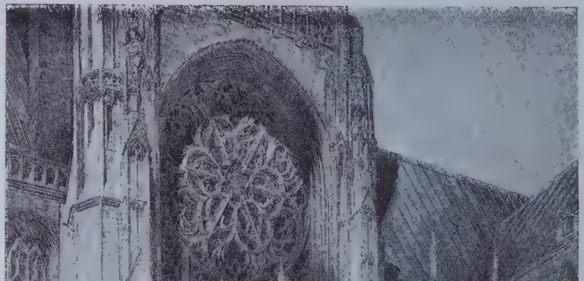
materials and the play of light and shade in his architectural works. He made innumerable studies that are beautiful drawings, expressing in them his intense love for architecture as the greatest of the arts.

To be associated with Goodhue was to feel strongly his wonderful personality, his cheerfulness in the face of difficulties, and his charm. All members of his office staff were intensely loyal because of that personality which endeared them to him and to his ideals. It appeared that his one object in life was the creation of beautiful things, and he felt that the labour that should go towards their creation should in itself be carried out in happiness. To know that his men were happy in their work was of great importance to him because he knew that out of happiness would come the best they had to give. His attitude in this respect is shown in an extract from his speech delivered to his friends gathered together at the nineteen hundred and twenty-two annual office festival of "Twelfth Night."

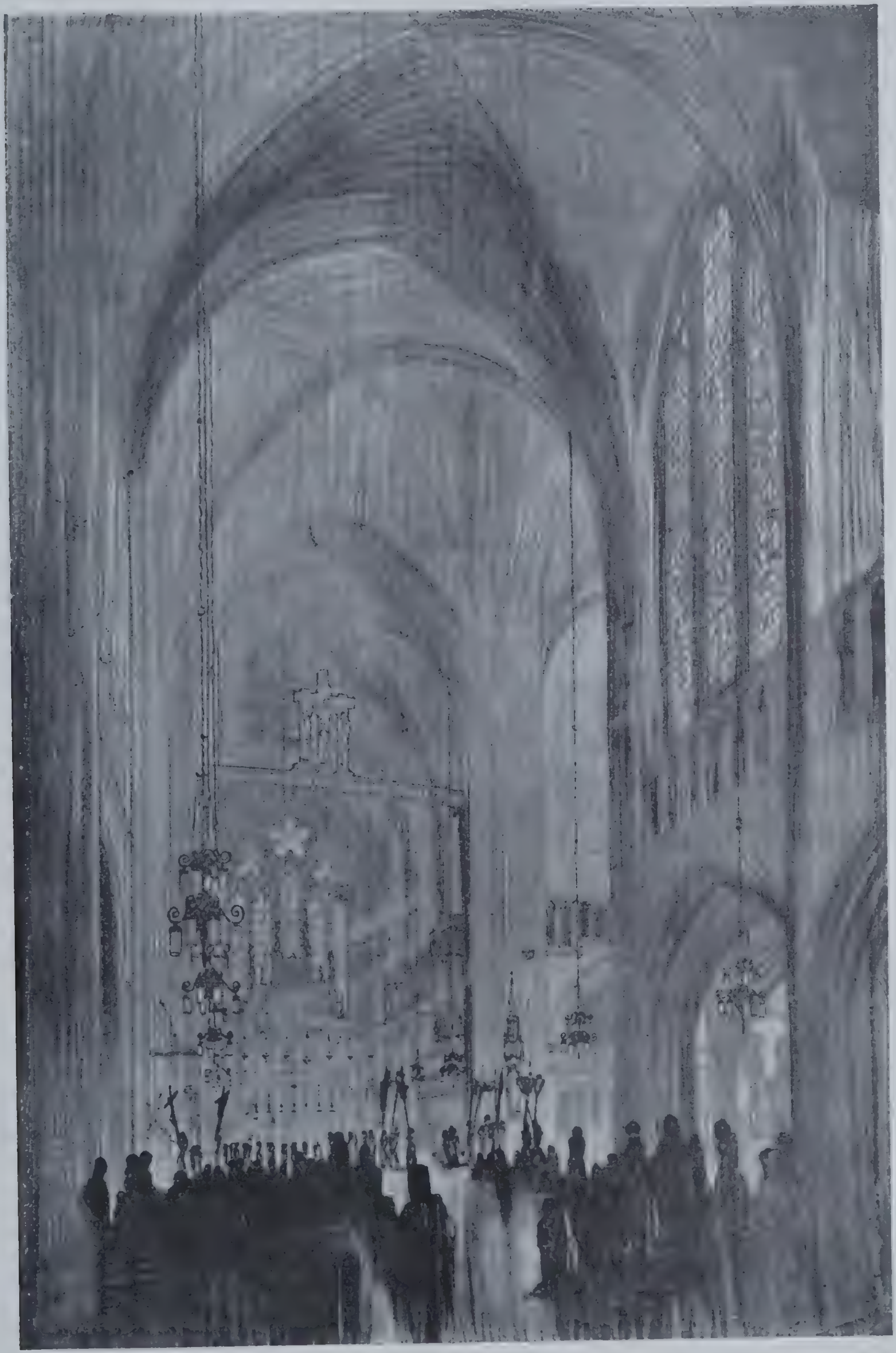
"I can't begin to tell you how fond I am of every member of the office force—how much I value them all and their various abilities. Of this force I am but one, a man-in-a-blouse, so to speak, with this *difference; that I have the power of veto.* I believe it makes for happiness, that men's work should be interesting and not always mere work, like that ruled by an "efficiency" fanatic—therefore it is perfectly well understood that anybody can look at *books, smoke, talk and sing*—especially the latter" . . . . . . "And everybody is free to differ with me in my solution of any given problem (mind you, I always possess the veto power), so that setting a man a job and then going away for a morning, a day, and even longer, I often come back to find my own solution drawn out with another and distinctly better one alongside."

His last conceptions, being the result of a natural growth of his ideals, and becoming freer from traditional influences as years advanced and confidence grew, were striving to make themselves known in forms that expressed through his personality the civilisation of his time and the aspirations of his country.

By the death of Bertram Grosvenor Goodhue the Architecture of to-day has suffered a great loss for the influence of his ideals was not only confined to America, but reached to the remoter countries of the world.

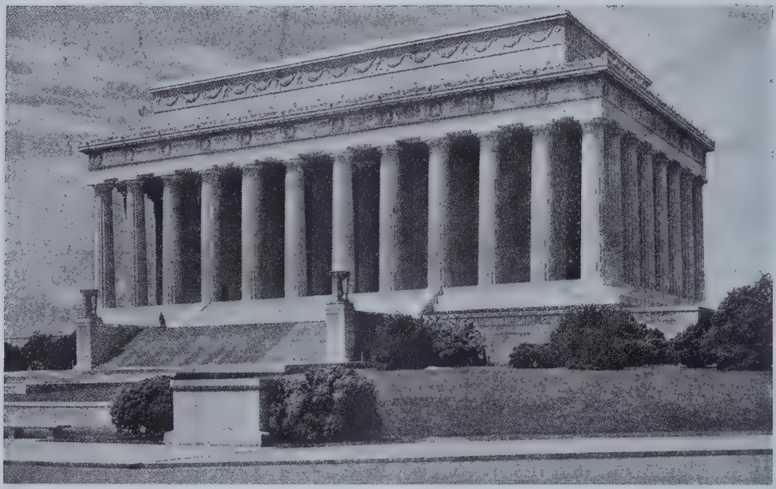


THE SOUTH TRANSEPT FRONT,
CATHEDRAL OF THE INCARNATION, BALTIMORE, MARYLAND.



(From a pencil drawing by John D. Moore).

INTERIOR, ST. VINCENT'S FERRER, NEW YORK
GOODHUE, ARCHITECT.



THE LINCOLN MEMORIAL, WASHINGTON.

HENRY BACON

AN APPRECIATION

By KEITH HARRIS

HENRY BACON was born at Watseka, Illinois, in 1866, and if that small town heralded his coming, his passing hence was mourned by the whole nation which had so recently paid him homage as Architect for the shrine of its beloved Abraham Lincoln.

At an early stage of his career Bacon set himself seriously to study the early Colonial Architecture in America, and the result may be traced in much of his work; later, however, owing probably to his brother's writings on the Restoration of Attos, the Architecture of Ancient Greece became his lode star, leading him ever towards that purity of form for which his soul craved, and which he attained so fully in his Lincoln Memorial.

In 1889 he was awarded the much-coveted Rotch Travelling Scholarship, and his sketches done during those journeyings showed not only his keen appreciation of classical work, but evinced an unerring eclecticism both in his choice of subject and his point of view as regards "composition."

His association with McKim, Mead and White gave him an opportunity to work on many important buildings, and his influence may be descried in the Rhode Island State Capitol and the Detroit Court House. As a draftsman he is pre-eminent, and many of his pen-and-ink perspectives are delightful, both pictorially and technically; more than this, he frequently made his own scale plans, and the remarkable plans and working drawings as well as the studies for the Lincoln Memorial were the work of his own hands.

There have been many Architects with a longer list of buildings to their credit, but there has never been one more sincere, and his aim through life "to do the best that can be done with the materials at hand" was never lost sight of

Among his more notable works is "The Court of the Four Seasons" at the San Francisco Exhibition in 1915. His Magnum opus, the famous Lincoln Memorial at Washington—a work acknowledged as one of the triumphs of monumental design.

Both Jules Irwin, the Artist, and Daniel Chester French, the Sculptor, were his intimate friends, and frequently worked in collaboration with him.

The world honours Henry Bacon as a great Architect; those who came in contact with him—to them he was "Harry" Bacon—admired him as a man above the breath of calumny, sincere and lovable to a rare degree, and it is seldom that one passes to his long rest with such genuine expressions of regret from all as did Henry Bacon in this year 1924.

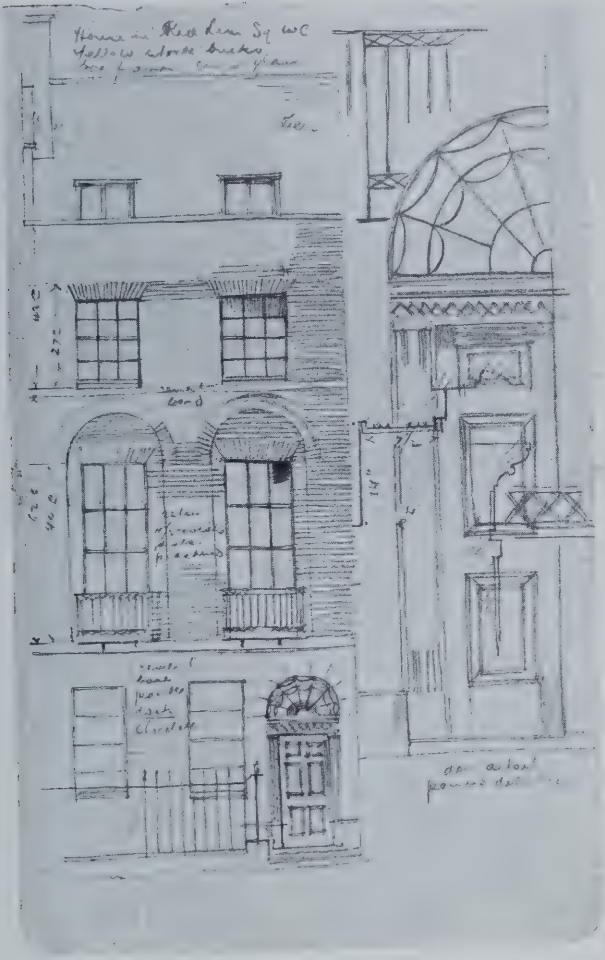


Fig. 1.

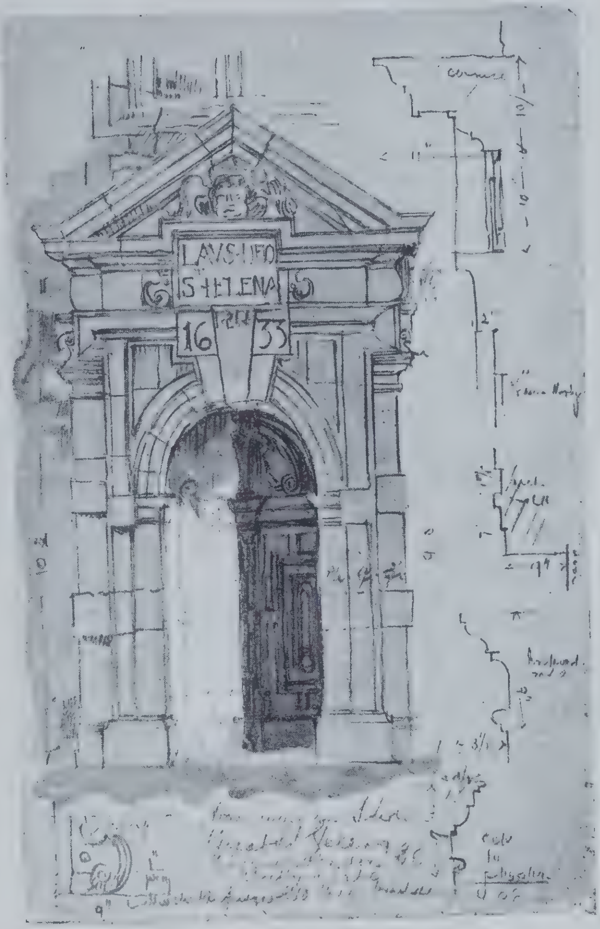


Fig. 2.

DOORWAYS TO THE LESSER BUILDINGS OF LONDON

By JOHN L. BERRY

TO the visiting student in Architecture the first impression of the London streets is one of disappointment. His enthusiastic imagination fosters visions of beautiful palaces and great public buildings of past ages, and he finds instead, what at first appear to him, monotonous rows of drab brick houses unrelieved in any way.

It is true there are fine palaces and great buildings to be found, in this the first city of the world; many of them tucked away around pleasant squares or within quiet courtyards; but the older streets of London are, for the most part, occupied by these lesser buildings, the doorways to which form the subject of this article.

These buildings would seem at first glance to be all of one type, extremely simple in design, built of what are known as the yellow London stock bricks, usually of three or four storeys and a basement (Fig. 1).

The front is set back from the kerb some six feet, and the doorway is approached over an arched bridgeway or a flat stone lintel. A wrought iron railing surrounds what forms the area to the basement, and a gateway in the railing gives access to a flight of stone steps leading thereto.

In contradiction to the maxim "Familiarity breeds contempt," these buildings on older acquaintance command the student's respect. They present to

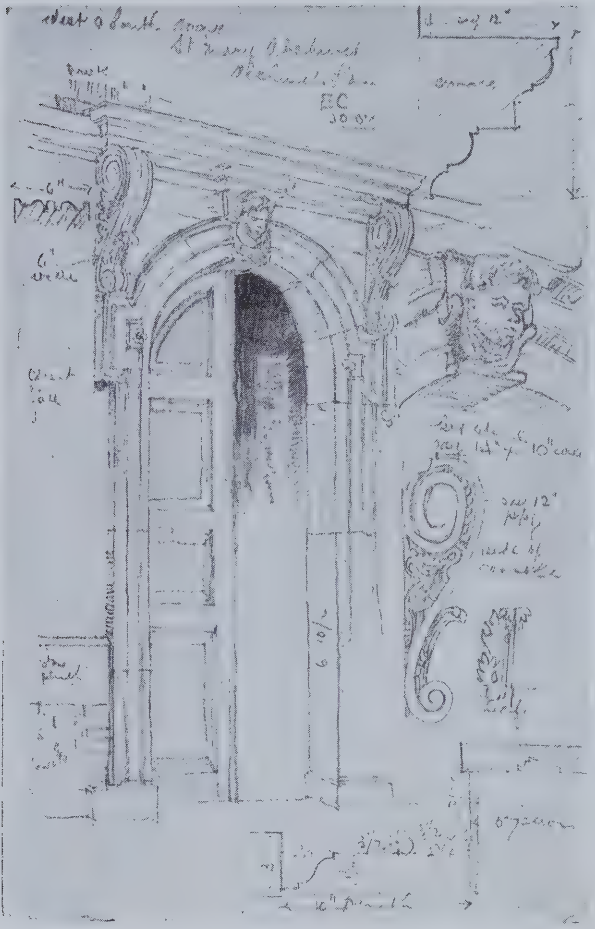


FIG. 3.

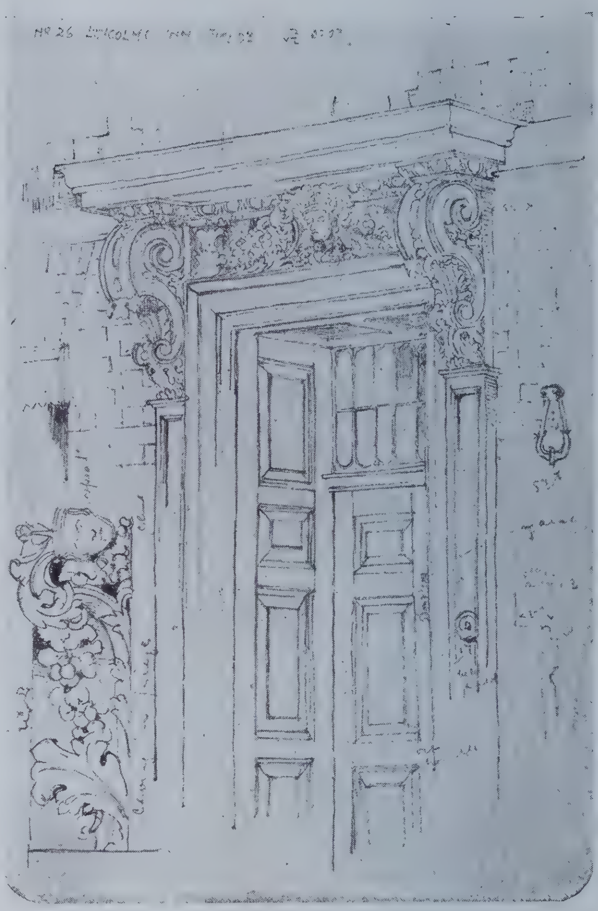


FIG. 4.

him many subtleties and surprises in the varied and charming designs of the projecting wrought iron balconies, the proportion of the box frame windows, and principally in the handling of the front doorways.

These doorways are often the only external expressions of the homely panelled interiors which the simple walls mask. For within these modest houses are frequently to be found fine panelled rooms, interestingly carved fireplaces and staircases, and enriched plaster ceilings.

From the East Central, or what is locally known as the City, London has grown outward.

The great Fire of 1666 has left comparatively little of the London of Mediaeval time, and few, if any, of the old half-timbered houses remain. Fig. 2 shows a Renaissance doorway that has been inserted in the old rubble wall of the Gothic Church of Great St. Helens in the City.

It is an early example of the incoming style, and is generally attributed to Inigo Jones, though its crude carvings and moulding hardly suggest the refined and careful handling of that master.

The Fire of London cleared the field for the new classic movement, and the genius of Wren was allowed full play in rebuilding, in the new manner, the numerous mediaeval churches that were destroyed. His imagination appears boundless, and many and varied are the monuments he has left us. Fig. 3 is a sketch of the doorway to one of the simplest and most charming of his smaller churches With the spread of London westward, the district, now known as the West Central, is more carefully laid out than the tortuous disposition of the City. The streets are wider and straight, and are interspersed with many well-planted squares, around which are grouped the simple brick houses already described.

It is perhaps not amiss here to remark that not one of these peaceful squares has been interfered with by the construction of the complex underground railway systems of modern London.

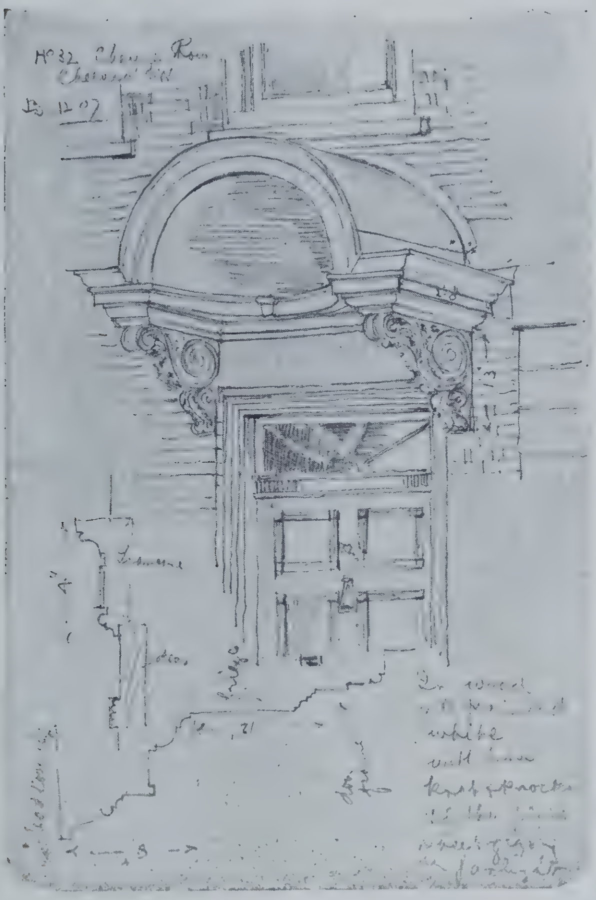


Fig. 5.

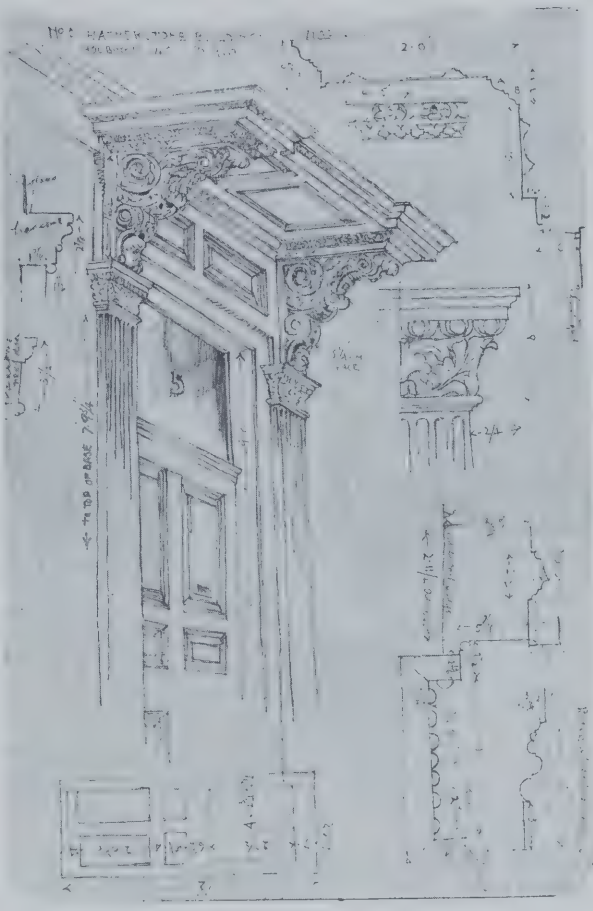


Fig. 7.

The doorways of these houses in the West Central are invariably in wood. Sometimes the friezes are richly carved as in Fig. 4, with carved consoles and cornices.

More frequently carved brackets support a panelled canopy of considerable projection (Fig. 5), whilst in some cases so closely are the doorways set that the canopies are duplicated.

Fig. 7 shows carved brackets supporting an interesting and unusual form of canopy to a doorway in Chelsea. In later examples of this type, the cove under the hood is often enriched with what is known as the shell ornament.

As the eighteenth century advanced the doorways were frequently contained within a large archway, as in Fig. 8, and fine examples are to be found having very interestingly treated fanlights carried out in wrought iron, Fig. 9.

Sir John Soane is perhaps the last of the great English Architects who carried on the Classic tradition, and the date of his death announces also the birth of another great movement in English Architecture, the Victorian period, when, further westward still and around the Palace wherein the young Queen spent her girlhood, streets of pretentious houses come into being, apeing the Palladian manner in stucco, and reflecting the smugness of a court dominated by a Teuton Prince.

Intending Candidates for R.I.B.A. examinations are reminded that next examination will be held in Sydney early in February, 1925, provided three or more candidates make the necessary application on or before October 15th, 1924. Notification has been received from R.I.B.A. that candidates who have been awarded the Soane Medallion or the Tite Prize, or have received certificates of Hon. Mention in either of these competitions, will be eligible to apply for exemption from the Design portion of the Final Examination, and that candidates who have entered for the Soane Medallion or Tite Prize are permitted to submit their drawings in place of the usual problems in Design required for Final Examination.

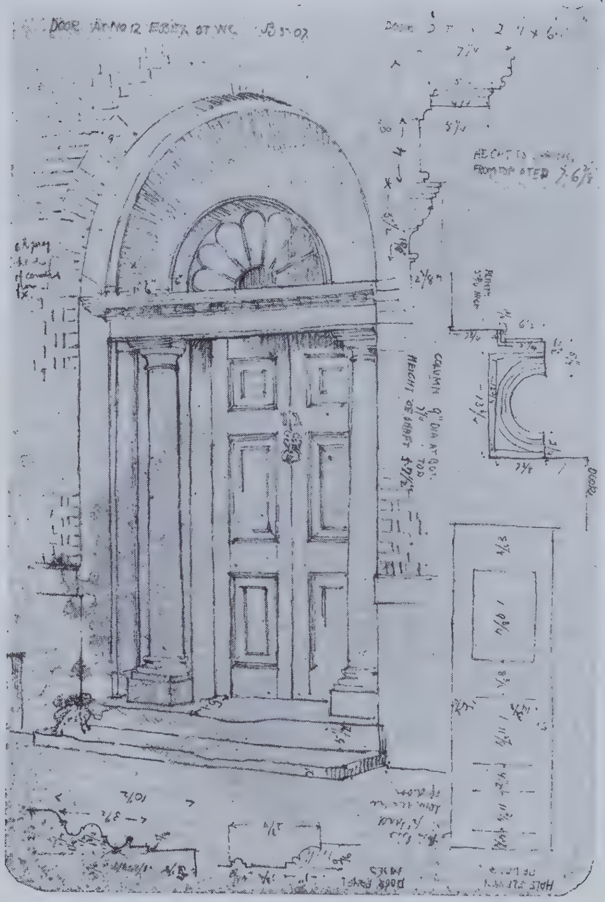


Fig. 8.

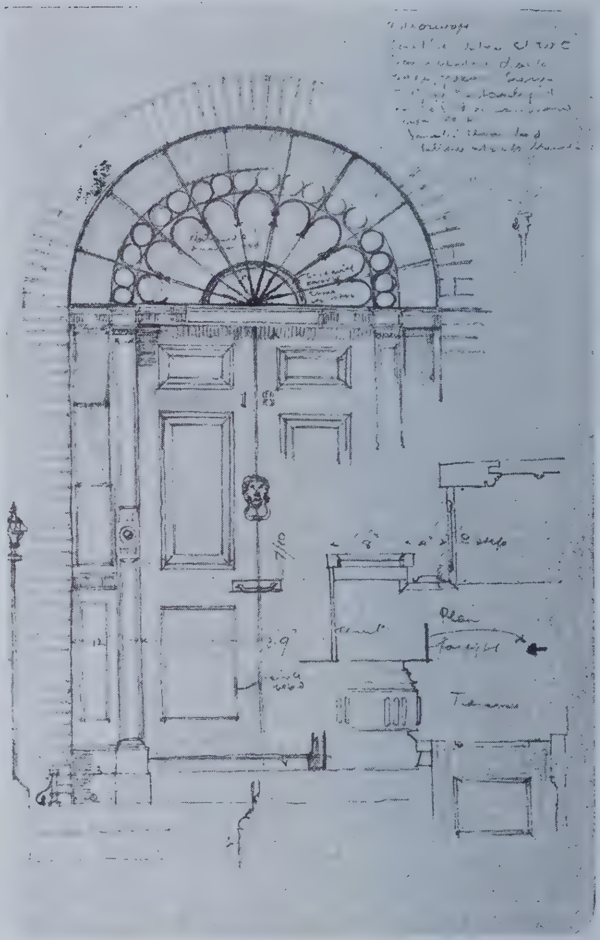


Fig. 9.

SYDNEY'S APPROACHES *By* B. J. WATERHOUSE

ALL roads lead to Rome!" What mental glimpses and suggestions that hackneyed remark envisions. Roads well built, durable, well surfaced, a pleasure to travel on, possessing a directness of purpose as would befit a city of Emperors. An opening up of vistas as the perspective widens of dignified, useful and beautiful buildings—as welcome to the vision as a draught of cool wine to the palate at the end of a long journey.

Sydney's approaches from its centre to the harbour, unhappily miss the advantages of vista so lavishly placed to our hands, and our entrances to the city from the foreshores are equally unsatisfactory as there is not one focal point to punctuate its unending weariness. An unpalatable reflection this—to an observer—this missing of golden opportunities to secure the maximum value of our city's setting for the citizens. Suggestive too, that from a practical point of view such haphazard routes and circulation fails to secure efficient functioning for business purposes.

Approaches from the suburbs to the city are equally inefficient, ugly, and in many cases badly constructed, and circumferential intercommunication almost entirely absent.

Must such conditions remain or shall they be speedily remedied so that our city shall develop on lines conducive to a reduction of traffic wear and tear, with all its financial loss into a well-regulated, orderly, and uncongested scientific traffic system.

We long for the day when we may shout from the hillsides: "All good roads lead to Sydney."

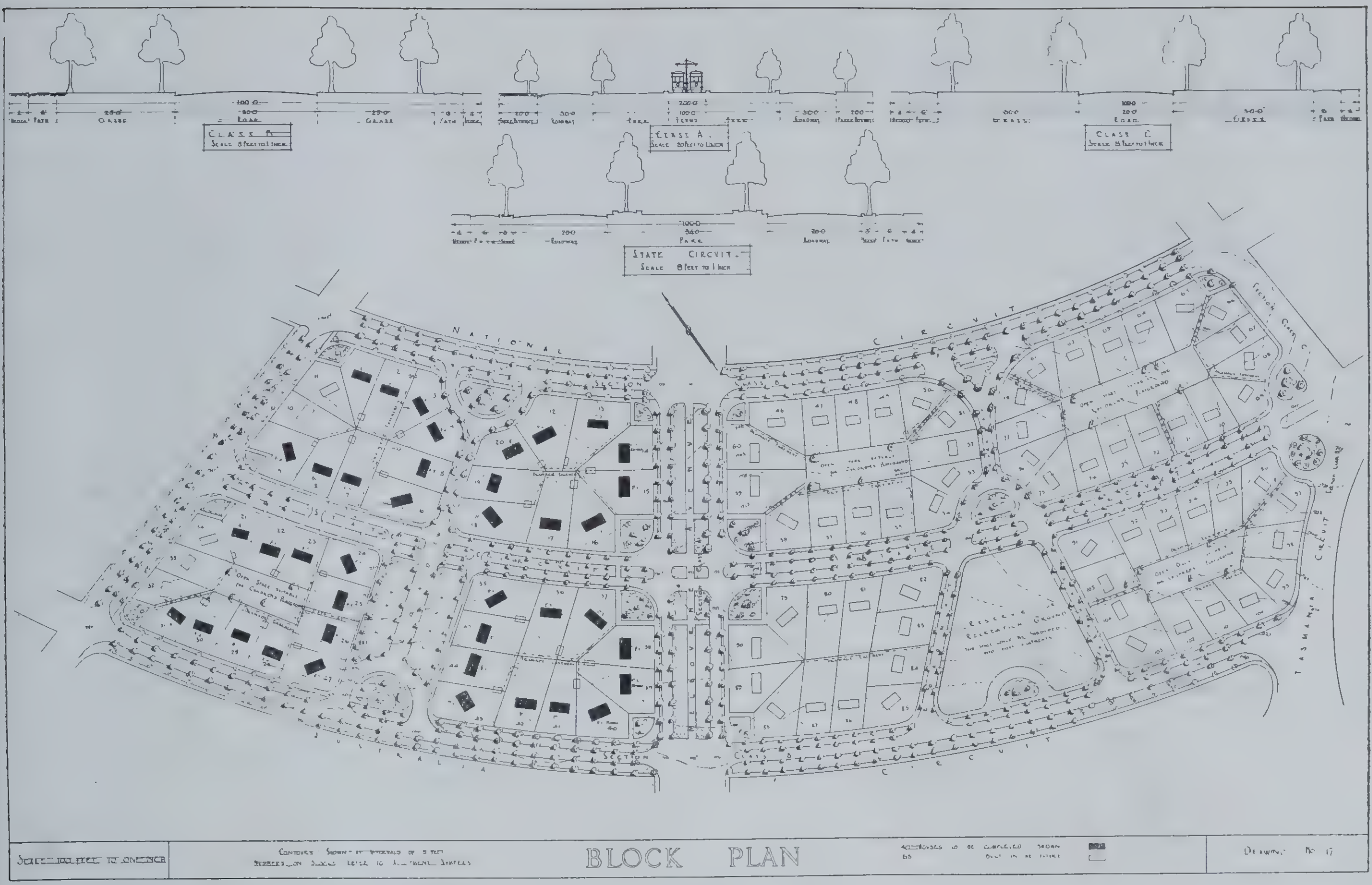
CANBERRA ARCHITECTURAL COMPETITION FOR RESIDENCES.

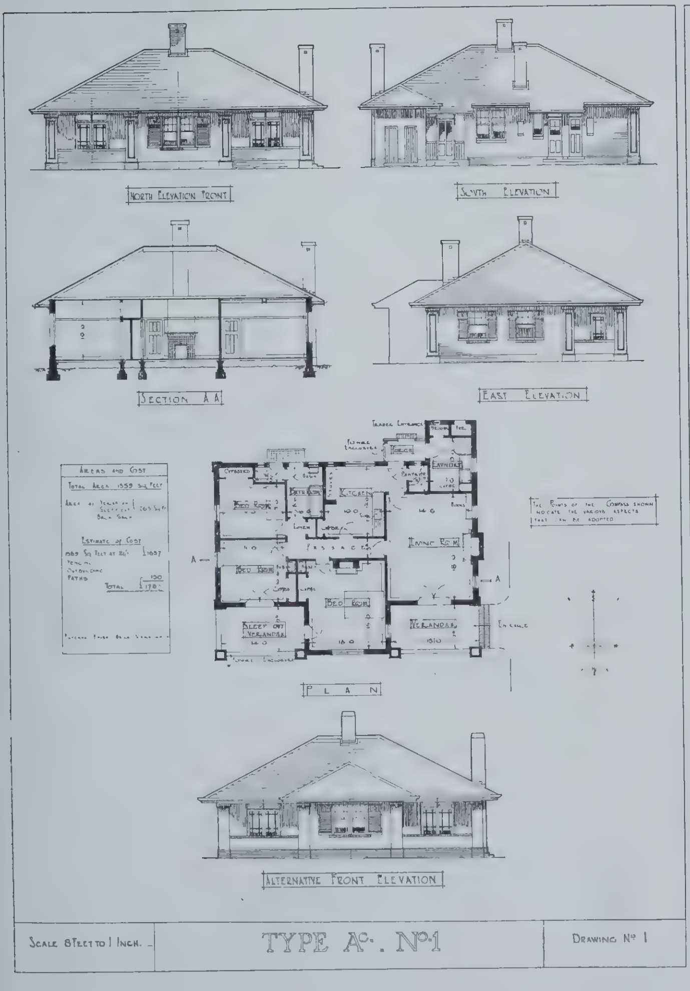
The result of this competition for four types of residences placed the premiated designs as follows:

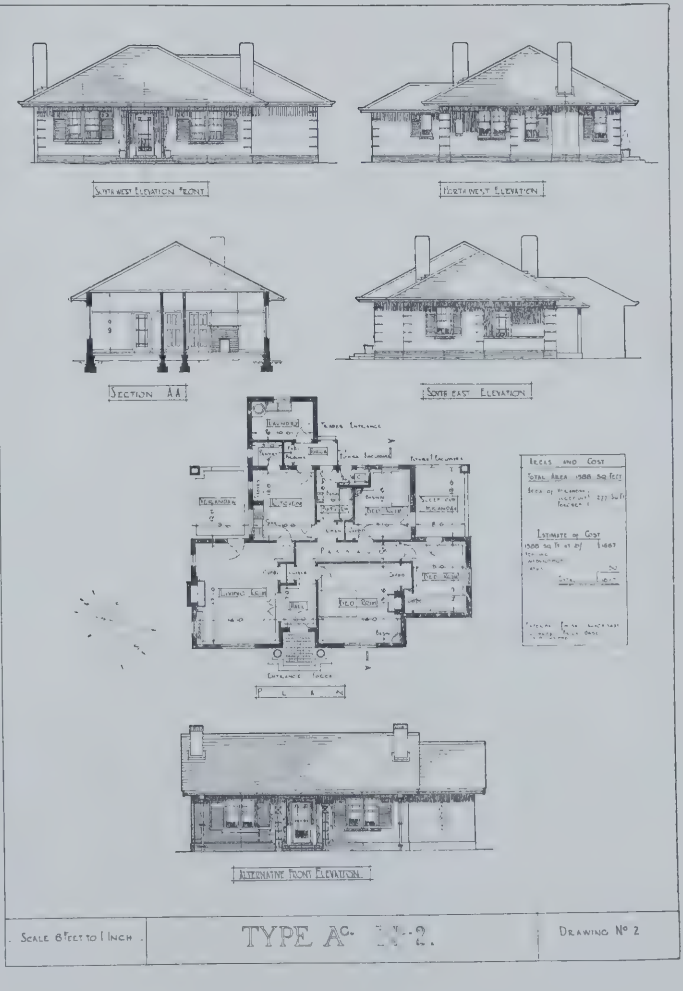
1st: Messrs. Oakley, Parkes, & Scarborough, Melbourne.
2nd: Mr. N. Hampson, Sydney.
3rd: Messrs. Grainger, Little, Barlow, & Hawkins, Melbourne.

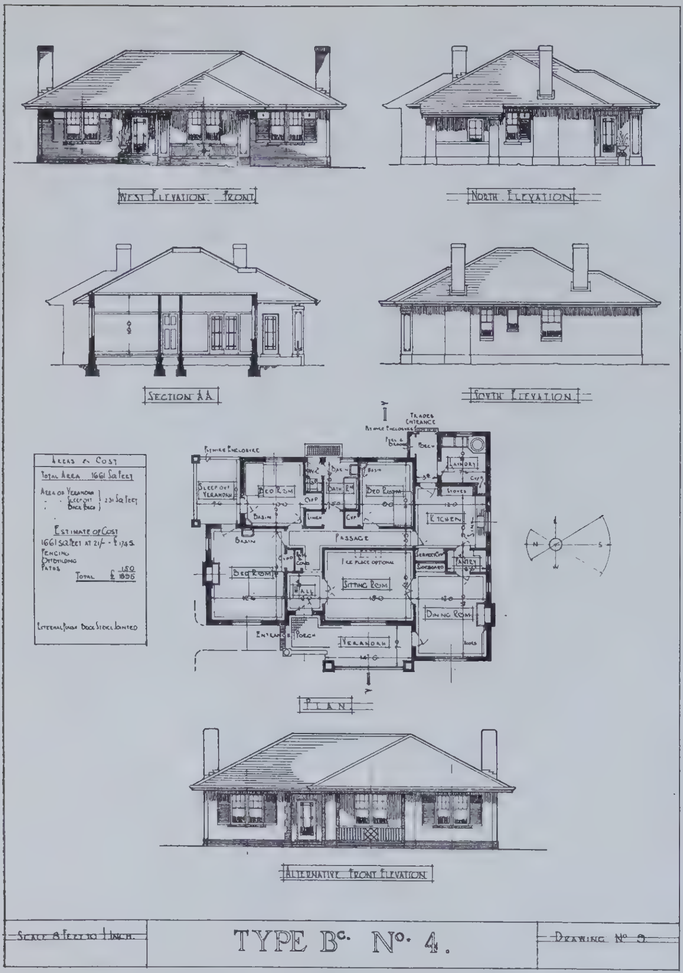
The premiums were: 1st, £150; 2nd, £100; 3rd, £50.

We publish the 1st premiated design.


CLASS B
SCALE 8 FEET TO 1 INCH
CLASS A.
SCALE 20 FEET TO 1 INCH
CLASS C
SCALE 8 FEET TO 1 INCH
STATE CIRCUIT.
SCALE 8 FEET TO 1 INCH
ROAD
GRASS
PATH
PARK
ROADWAY
NATIONAL
CIRCUIT
AUSTRALIA
SECTION
CIRCUIT
TASMANIA CIRCUIT
RESERVE RECREATION GROUND
OPEN SPACE SUITABLE FOR CHILDREN'S PLAYGROUND
SCALE 100 FEET TO ONE INCH
CONTOURS SHOWN AT INTERVALS OF 5 FEET
NUMBERS ON BLOCKS REFER TO ALLOTMENT NUMBERS
BLOCK PLAN
DRAWING No 17


NORTH ELEVATION FRONT
SOUTH ELEVATION
SECTION AA
EAST ELEVATION
AREAS AND COST
TOTAL AREA 1559 SQ FEET
ESTIMATE OF COST
1559 SQ FEET AT 21/- £1637
PATHS
TOTAL £1787
BED ROOM
KITCHEN
LAUNDRY
LIVING ROOM
PASSAGE
BED ROOM
BED ROOM
SLEEP OUT VERANDAH
VERANDAH
THE POINTS OF THE COMPASS SHOWN INDICATE THE VARIOUS ASPECTS THAT MAY BE ADOPTED
A
A
PLAN
ALTERNATIVE FRONT ELEVATION
SCALE 8 FEET TO 1 INCH.
TYPE Ac. No 1
DRAWING No 1


SOUTH WEST ELEVATION FRONT
NORTH WEST ELEVATION
SECTION AA
SOUTH EAST ELEVATION
TRADES ENTRANCE
LAUNDRY
KITCHEN
VERANDAH
SLEEP OUT VERANDAH
LIVING ROOM
BED ROOM
BED ROOM
HALL
ENTRANCE PORCH
PLAN
AREAS AND COST
TOTAL AREA 1588 SQ FEET
277 SQ FT
ESTIMATE OF COST
1588 SQ FT AT 21/- £1667
ALTERNATIVE FRONT ELEVATION
SCALE 8 FEET TO 1 INCH
TYPE Ac. No 2.
DRAWING No 2



Areas & Cost

Total Area 1661 Sq Feet

Area of Verandah
" " Sleep out } 231 Sq Feet
" Back Porch

Estimate of Cost

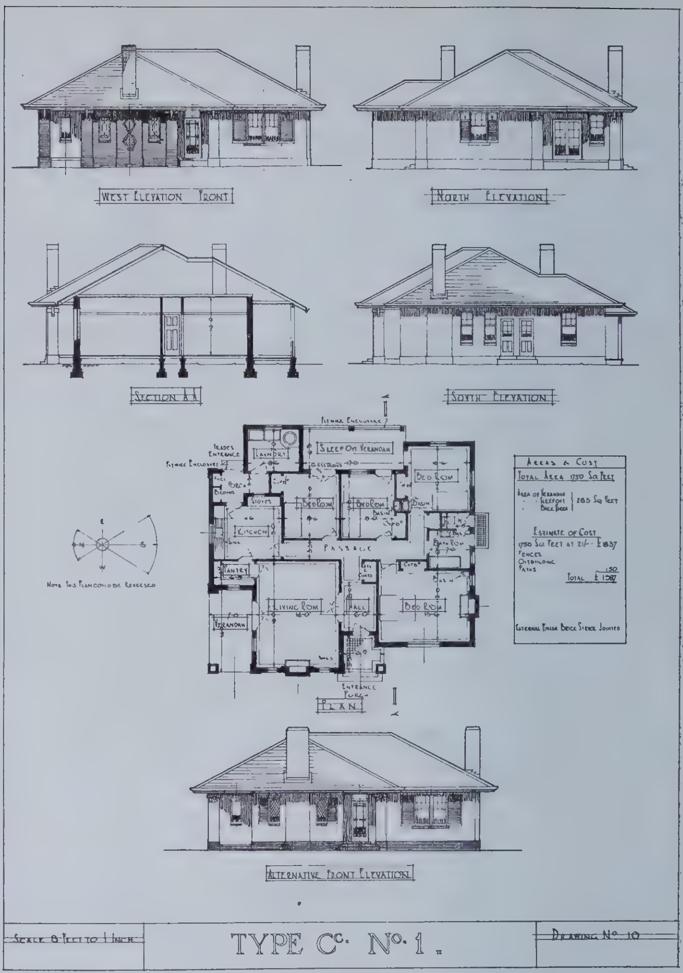
1661 Sq Feet at 21/- = £1745.
Fencing
Outbuildings
Paths 150
Total £ 1895

External Finish Brick Struck Jointed

Scale 8 Feet to 1 Inch.

TYPE B^C. N^O. 4.

Drawing N^O 9



Areas & Cost

Total Area 1750 Sq Feet

Area of Verandah
" " Sleep out } 283 Sq Feet
" Back Porch

Estimate of Cost

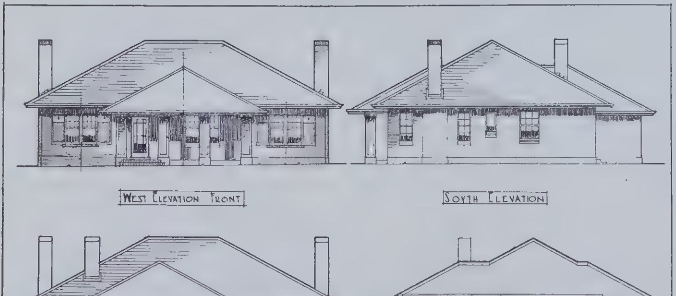
1750 Sq Feet at 21/- = £1837
Fences
Outbuildings
Paths 150
Total £ 1987

External Finish Brick Struck Jointed

Scale 8 Feet to 1 Inch.

TYPE C^C. N^O. 1.

Drawing N^O 10



Areas & Cost

Total Area 1984 Sq Feet

Area of Verandah
" " Sleep out } 281 Sq Ft
" Back Porch

Estimate of Cost

1984 Sq Feet at 20/- = £1984
Fencing
Outbuildings
Paths 50
Total £ 2034

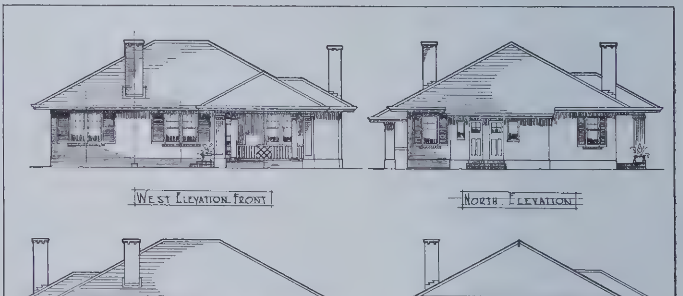
The above areas and estimate are based on the alternative design

External Finish Brick Struck Jointed

Scale 8 Feet to 1 Inch

TYPE D^C. N^O. 1.

Drawing N^O 13



Areas & Cost

Total Area 1874 Sq Feet

Area of Verandah
" " Sleep out } 256 Sq Feet
" " Back Porch

Estimate of Cost

1874 Sq Feet at 20/- = £1874.
Fencing
Outbuildings
Back Porch 150
Total £ 2024

External Finish Brick Struck Jointed

Scale 8 Feet to 1 Inch

TYPE D^C. N^O. 2.

Drawing N^O 14

ARCHITECTURE

THE JOURNAL OF PROCEEDINGS
OF THE INSTITUTE OF ARCHITECTS OF
NEW SOUTH WALES

Vol. 13. No. 10.

Registered at the G.P.O., Sydney, for transmission by post as a newspaper.

October, 1924

INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES
ORDINARY GENERAL MEETING
1st SEPTEMBER, 1924.

TWO ADDRESSES:

Some Impressions of Travel
By ALDERMAN MILNER STEPHEN

The Historical Towns of New South Wales
By FRANK WALKER, F.R.A.H.S.

SIR CHARLES ROSENTHAL (THE PRESIDENT) occupied the Chair.

The Minutes of the last meeting were confirmed.

THE CHAIRMAN: I owe you an apology for not being over in Adelaide to-night. I was appointed as a delegate from the Institute to go to that City to the Science Congress, and I made all arrangements, but at the last minute it was made clear to me that I ought to stop in Sydney because there were two important Bills before Parliament, the City Council Bill and the Main Roads Bill, and particularly in regard to the former my colleagues in the Council suggested that as I was the only Member of Parliament in the Council, my presence in Sydney might be necessary. Professor Wilkinson has, therefore, gone to Adelaide as your delegate.

I have to announce apologies to-night from Professor Wilkinson, Messrs. Clamp, Mould, Peddle and Waterhouse.

You are asked to ballot for the election of a new member. Mr. John Emanuel Lundholm has been proposed by Messrs. S. H. Buchanan, De Putron and Waterhouse, and approved by the Council on the 19th May last.

(Colonel Hurst and Mr. F. Munnings were appointed scrutineers, and at a later stage in the meeting, it was announced that Mr. Lundholm had been unanimously elected as a Fellow of the Institute.)

THE CHAIRMAN: The next meeting will be held on Tuesday, the 7th October, when Mr. H. C. Kent will give an address on "Reminiscences of Building Methods in the seventies under John Young." Mr. Kent is the oldest practitioner of architecture in the City, and the name of John Young is well known even to the younger members, while the older members will remember him not only as a master builder but a whole-hearted citizen. When the notices go out I hope you will invite as many of your friends as possible to come along, because it is a pity to have these lectures prepared, many of them of historical value, and for the public not to receive the benefit of hearing them.

I might mention that at a Council Meeting to-day a sub-committee of the Institute which had been appointed to go into the question of our Constitution with a view to amending it in such a way as to make it acceptable to the Architectural Association as well as to ourselves, with the idea of the ultimate amalgamation of the two bodies, reported to-day that their work is practically completed, and we have called a meeting of the Council for next Monday night in order to finalise the matter, if possible. I hope that the outcome of it will be that we will get the unanimous approval of our members when the plan is submitted, and that later on the Architectural Association will be equally unanimous, so that before the end of the year we may hope to have the architectural profession really solidified as far as Architecture is concerned, and be able to start the New Year with a very substantial membership roll.

You will remember that at our last gathering Mr. Milner Stephen was to have given us an address, but it had to be postponed on account of the lanternist not putting in an appearance. A letter has been received from the Secretary of the Royal Society apologising for the absence of the operator, which was due to a confusion of dates. Mr. Walker is to deliver a lecture to-night on "Australian Towns with a History," and with his kind permission, Mr. Stephen will deliver his first. On behalf of the Institute I wish to say how much we appreciate these two gentlemen coming along. We try from month to month to arrange for papers of interest, not only to the members but also to the public generally. These addresses appear in our journal, and thus come under the notice of all our members scattered throughout the State. I would like those who lecture here to feel that their remarks are broadcast to a much larger circle than would appear, and they are permanently recorded.

Both to the lecturers and the members, I wish to tender an apology for leaving early. On this memorable day for the last six years the Second Division Officers of the A.I.F. have met to celebrate perhaps the most important battle in which they were engaged on the other side of the world. I refer to the battle of Mt. St. Quentin. It has been our custom ever since to have an annual reunion. I therefore trust members will excuse my leaving about 8.30.

I have now much pleasure in asking Mr. Milner Stephen to give his lecture on "Some Impressions of Travel."

SOME IMPRESSIONS OF TRAVEL

By ALDERMAN MILNER STEPHEN

WHEN you gentlemen did me the honour of asking me to address you this evening it seemed best that I should try to convey in some way the stimulus which I derived during a rush trip round the world, from things which force themselves upon the traveller's attention, indicating to him how features, natural or artificial, have been seized upon by the town-makers of other countries.

May I proceed at once to read what lessons I may from the few slides which I have of some of the places which we visited?

Cairo Citadel.—The natural features of the rock rising from the heart of Cairo have been well seized upon for the purpose of creating one of the most inspiring views seen by the traveller approaching any city. The minarets and domes peculiar to the style of architecture of the nation are well arranged and have a wonderful effect (we have something by way of contrast in some of the "Modern Flats" disfiguring the city's skyline). It was a joy to see these minarets, as one approached Cairo for the first time, in the train compartments hermetically sealed to keep out Egypt's awful dust, or, as one returned from long journeys, which are necessary in Egypt. The Egyptian planned, of course, for the future life; he had a rule that a house in which any person died should never thereafter be repaired, and they were not always successful in carrying the dying man into the garden in time to avoid the effect of this rule. Their planning was of temples and tombs, which have resulted in the preservation of the historical memorials which have told us so much of the life of the ancient Egyptian and his history.

Los Angeles.—It is a far cry to Los Angeles, modern of the modern. Its inhabitants claim that they are building there at present faster than in any other place in the world. Certainly last year it was computed that the total length of the buildings being constructed was eight solid miles of bricks and mortar.

The slide represents part of a street in one of the moderate quarters. I was told (and the results verify it though I could not obtain a copy of the building regulations or covenants) that in each area a building covenant is imposed by the owners of land and approved by the local authority, ensuring a certain amount of uniformity amongst the buildings. The regulation may even go to the length of providing as to the race that is to be allowed in or excluded from an area. The result is that a person going to a neighbourhood knows that he will not have neighbours too poor, or too rich, too black or too white for him, and the result is certainly pleasing. You can see from the slide that the houses are set back from the road; then there is a strip of grass between the road and the house, and along this strip of grass runs a concrete path, from which the paths to the dwellings shoot off at right angles. The slide does not show the best style of bungalow, but rather the Spanish style, which is somewhat affected in some of the later buildings which I saw, and it is not picturesque to my eye.

The roofs of the bungalows are low, and they add to their appearance. It has been suggested to me that this is more suitable in Los Angeles, where the nights are reputed to be cool, than in the country districts of New South Wales, where the nights are what they are.

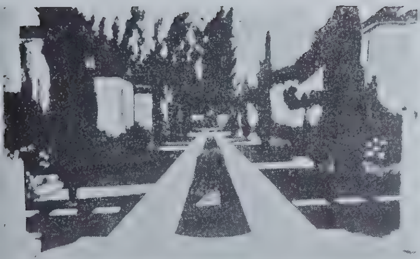
One finds this method of planning streets all through California. Flat sites are made beautiful by avenues of trees and stretches of grass. The train draws up at times practically in the centre of a grass plot.

The Californian method certainly suggests what might be done here in the way of regulations, covenants, and grass borders, and in fact there are here places where the same principle has been adopted, though it is not everybody who likes living so much in the light of day as in the residential parts of Los Angeles.

San Francisco Civic Centre.—The people of San Francisco made the best possible use of the fire, which was looked upon as a disaster, but was converted by them into an opportunity for a resurrection. The streets are broad and clean, the buildings fine.

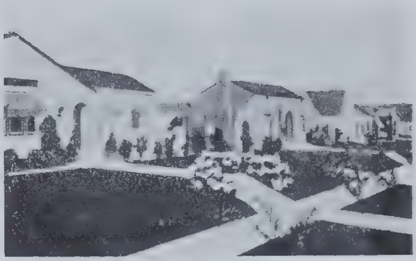
CAIRO CITADEL.
The natural features of the rock rising from the heart of Cairo has been well seized upon to inspire those who approach the city.

TUTANKHAMEN'S TOMB.
A continuous stream of pilgrims flowed to the tomb. The halt, the maimed, and the blind were carried in chairs.



LOS ANGELES.
This slide represents part of a street in one of the moderate quarters. The houses are set back from the road, and there is a strip of grass between the road and the buildings.

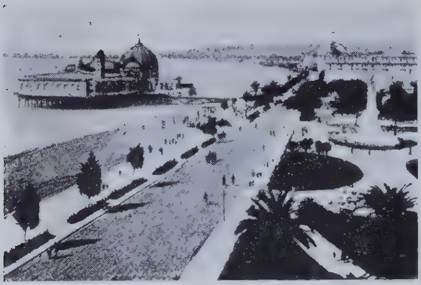
SAN FRANCISCO CIVIC CENTRE.
The civic centre is far removed from the business area, and is reached in a few minutes by tram. The fine hall has a chance to show itself in a spacious square.



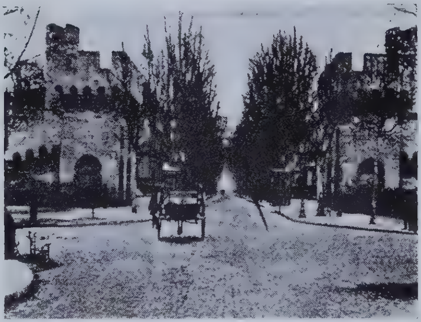
LOS ANGELES.
This slide represents a "slum" area. The houses are small and close together. In any other method of treatment the result would mean squalor, but the characteristic provision of grass and trees makes the difference.

SAN FRANCISCO. GOLDEN GATE PARK BAND STAND.
This shows what can be done for the citizen in giving him the facility for hearing good music among luxurious surroundings.

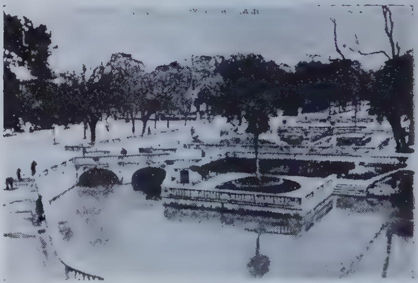
NEW YORK.
As seen from an aeroplane, showing how the buildings mass together.



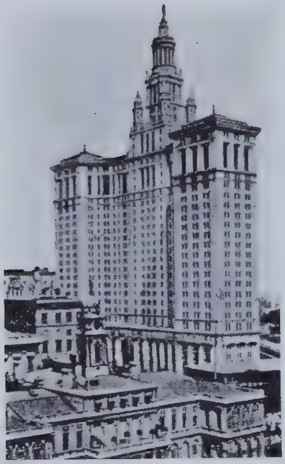
WATER PROMENADE, NICE.
Emphasizing the value of width in design and selection.



AVIGNON, FRANCE.
The old fortifications have been made use of to set off modern boulevards.

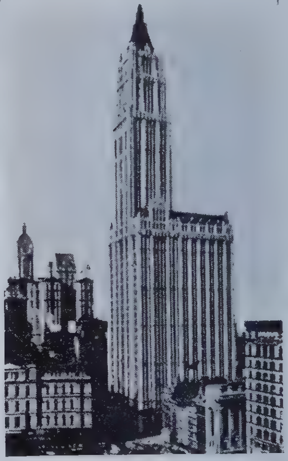


NIMES.
The old Roman constructions for the baths have been similarly used. "The Gardens of the Fountains," where this water commences, were a delight.

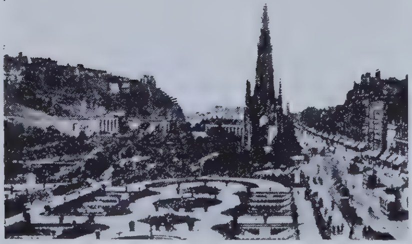


The famous Municipal Building of New York.

RARATONGA.
An example of Nature's architecture.

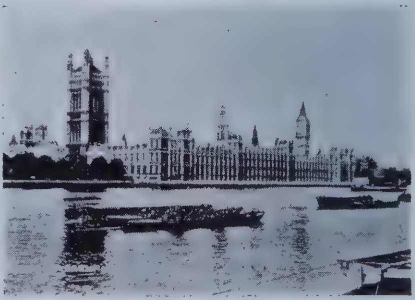


The Woolworth Building, whose imposing contours attract the attention of all visitors to New York.



Princes St., Edinburgh.

Avenue, Stratford on Avon, showing how limes make an attractive passageway.



The Houses of Parliament. London. An expanse of water adds to dignity of structure.

The civic centre, a few minutes by tram, is away from the business and shopping centre. A spot was chosen where there was plenty of room, and the fine civic hall has a chance to show itself. The Public Library is on the opposite side of the square, and is a wonderful building, though not so imposing as the library in New York. The library is a great feature of American cities. Branches are established throughout the Metropolitan area, and are so availed of that it is hardly exaggeration to say that it is difficult to find a bookshop in the cities.

It is to be regretted that the movement for a civic centre in Sydney is not making greater progress. It should obviously be in Hyde Park. The libraries, lending and reading, should be consolidated. The part of the Park taken up by buildings should be compensated for by opening lungs in other parts of the city.

Personally I think that the whole of the library "business" should be in the hands of the City, as in America, the present division between the lending and reading library takes away from the dignity and usefulness of each.

Los Angeles—Parking Cars.—Cars are parked in many of the streets of Los Angeles at an angle with the pavement. Huge trams run down the centre of the street, and as everybody in the place owns a car, the conditions of traffic are terrifying. If you stay at a town hotel, you feel inclined to wander round and round your own block so as to avoid crossing a street. The corners of the streets have almost universally, in the centre of the town, the mechanical policeman, the "STOP" and "GO" signs. After a time one becomes expert at crossing either to North or to East to suit the position of the signs, but I don't know if anyone has solved the question of how to avoid the traffic which turns the corner.

New York.—The tongue of land seems to be two miles wide by 40 miles long. Those are not the exact figures, but the concentration is alarming. The problem of getting the workers to and from New York is principally solved by the system of "subways," as they term the underground railways. In some places there are five "storeys" of traffic ways. (1) The overhead railway; (2) the street tramway; (3) the first "subway"; (4) the second "subway"; (5) the third "subway," certain "subways" at certain times being used as express trains only.

As we approached it at about 5 p.m. it gave me the impression of being a city of the dead. An American friend explained the impression by saying "Yes, at that hour all New York is in the 'subways.' " The "subway" brings the Equitable inhabitant into the lower basement of the building; he finds all his requirements met in the building, and for a month at a time he may not go into the streets of New York. If he does, he does not take a yellow taxi, "the yellow peril," as we christened them. Dr. Braithwaite, of the Equitable Life, on learning that I had come by that means of locomotion, congratulated me warmly on my escape from imminent death. The taxis have the best drivers and the best brakes in the world. They need them. They say 50 per cent. of the mud guards are broken, in Los Angeles 90 per cent. So too, when we asked our 'bus conductor if he were coming back on our 'bus, he replied, "I hope so. I have been safely through two WARS!" In New York there are sentry boxes high up in the crossways of the streets in Fifth Avenue and other streets. Red, yellow, and green lights indicate when the traffic is to go along, across, or to stop between changes. In other streets there is more elasticity; the policeman gives precedence to the main North and South avenues in order to keep the streets clear. The traffic travels at a great pace when released. This is essential to keep the streets clear. Our expostulations to our driver were met with the reply that he would be run into from behind if he slowed.

In San Francisco there are the "Stop and Go" signs, but in Market Street there is a double line of trams—I mean quadruple line—and the only way to save an enormous increase in the death rate is to station a policeman at crossings like the Emporium crossing, who actually escorts the pedestrians across the street.

The London policeman takes the place of the mechanical signs. It may be that the streets are not straight enough, nor the stoppings uniform enough for the mechanical methods of American Cities. This also has the advantage that the visitor to London is brought more often into touch with that most marvellous of men, the London policeman. In Paris the motors will charge any single pedestrian, who knows that he must get out of the way or be fined. Small crowds congregate at corners and escort each other across. They know that the driver will charge one, or even two or three, as he may succeed in destroying or scattering the lot, but he will not charge a crowd, for fear of getting the corpses entangled in the wheels. Of the 20 Paris policemen who learned London methods and tried to apply them in Paris, they say 10 were dead within a week, the few survivors stand on the street islands and attempt to direct the traffic from that position of comparative security.

Parks.—Paris is, of course, one of the most delightful cities of the world. It teaches the lesson that a city's greatest beauty is in its parks and open spaces. In and around Paris the democracy of to-day enjoys the legacy from the kingdom of the past of Royal gardens, hunting grounds, and forests. The beauty of the Tuileries, Champs Elysees, and the Bois de Boulogne is great, and the vista at Versailles fairly takes one's breath away. London is also rich in parks and open spaces, it seems strange that the older cities are so well off, when town-planning is new to the majority of us moderns. We rather get than give ideas. There are Hyde Park, Kensington Gardens, Regent Park, to mention a few. And here again, as in Paris, the people of to-day get the advantage of the ancient Royal spaces. Further out there is Epping Forest. The City of London has spent on this area over a quarter of a million pounds in the last 50 years in securing privileges for the whole metropolitan area, and in extending the forest. The area is, I think, about 5000 acres, and this large area has been secured principally by the enforcement of rights of common granted centuries ago.

So Wimbledon Common and Common land in the suburbs and country towns provide air spaces and beauty spots for thousands.

London Bridges.—As the Sydney Harbour Bridge will be with us in the near future, may I conclude with some interesting information as to the cost and control of the London Bridges, taken from an official report. "London, Brackfriars, and Southwark Bridges and the Tower Bridge are under the control and maintenance of the City Corporation, and the expenses connected with the building and maintenances of these bridges, together with St. Michael's Bridge and Peg's Hole Bridge, Stratford, fall upon the revenues of the Bridge House Estates, and without cost to the ratepayers. The title of the Corporation to the Bridge House Estates is very ancient, and the property was generally granted or devised by Kings of England and 'charitable and well disposed persons" and is held by the Mayor and Commonalty and Citizens of the City of London upon Trust. So London has a great advantage over the City of Sydney, where City has no control over the bridge, but pays the whole of the Municipal contribution for the south side of the Harbour.

MR. SCOTT: I have much pleasure in proposing a vote of thanks. I think we ought to feel very grateful to Mr. Stephen for coming here, slipping in his time between two busy meetings, especially when we remember the way we treated him before, or rather our lantern operator. His address was highly interesting in every respect. I noted that his first picture was one of the old world, and suddenly he slipped into the new world and dealt a great deal with New York. I look upon the city of Sydney as a parallel to New York and the same reasons that cause the people of New York to raise their buildings on that peninsula to a reasonable height apply here. I am hopeful that the municipality of this city and the Government of the future will recognise that the congestion in Sydney will be best relieved by allowing us to raise our buildings to a reasonable limit. If we have to congregate within the city the easiest way is to go upwards and to spread our streets wider, make wide streets and high buildings.

We have to remember, of course, that many of the beauties we see in other countries are handed down from the Kings of the past, so that even kings of continental countries had their uses. We being a new people naturally are not so prone to start beautifying our city because we have had to scratch for a living in the past. We are gradually getting beyond that time and it is to be hoped that with the assistance of the Municipality of Sydney, the Government, the Town Planning Association, etc., the time will come when we, as citizens as well as architects, will be able to really beautify our city. We have missed many opportunities in the past, but that is no reason why we should still miss them in the future. We have chances that no other city has, and we have not so far availed ourselves of them very much, for instance, how few people really go to such places as Centennial Park.

When Mr. Stephen pointed out the beauties of the French towns it was interesting to think of the years and years those places have been kept in good order and maintained by the love of the people and their civic pride. Civic pride is what we want to cultivate in Sydney; you see its absence every day.

I think we owe a debt of gratitude to Mr. Stephen for having, in the first place, consented to deliver his lecture to us, and in the second place to have come a second time to do it. I have much pleasure in proposing a hearty vote of thanks to him.

MR. HARRIS: I have very much pleasure in seconding the motion. I feel that in coming here to-night Mr. Stephen has shown us the great advantage of travelling abroad. He has also intimated to us the pleasure it has given him, and he is one who has come back and is willing to share his pleasures and his knowledge with those who are not so fortunate. From what Mr. Stephen has said, it was a great blessing indeed that he was spared to come back, because he seems to have had some very narrow escapes.

He did not quite pay the tribute to the Parisian taxi-driver that he deserves. Those taxis never use more than three wheels and do most of their work on one. The slide that appealed to me most of all was the civic centre in San Francisco. As a matter of fact, a plan had been prepared for the town before the fire, but after the fire San Francisco suffered from the same trouble as most towns. They commenced to merely re-build on the same lines, but they saw their mistake in time; their civic pride came to the rescue. We owe a debt of gratitude to Mr. Stephen for showing us what we can aim for in our own city. Our future is entirely in our own hands. We still say Parliament or the Council should do this or that, but we should do it ourselves collectively. We have the opportunity, and it is for us to take advantage of it. I add my quota of appreciation of Mr. Stephen's address.

MR. ANDERSON (who took the chair on the retirement of Sir Charles Rosenthal): I am quite sure were I to give permission, quite a number would like to express their appreciation of Mr. Stephen's kindness, but we must remember that Mr. Stephen has another engagement. I would like just to present to you our warmest thanks for this interesting lecture. We do not all have the opportunity of going into some of the by-ways of travel, and to me some of the most interesting views were those like Avignon, off the beaten track. It is there sometimes that we get the real gems of beauty. As to traffic, it is a dangerous thing to venture on in a meeting like this. We probably will not get run over by taxis, but it is too debatable a topic to introduce now. As regards the Bridge, I am very sorry that the city of Sydney is asked to help us poor folk who live on the other side of the Harbour to obtain our little Bridge. When built, we shall all appreciate and benefit by what is going to be one of the wonders of the world. How it is going to help us artistically remains to be seen.

I am expressing the heartfelt thanks of everyone here when I present to you our grateful thanks for your address.

OLD GOVERNMENT HOUSE, WINDSOR, N.S.W.
Etching by Sydney Ure Smith.

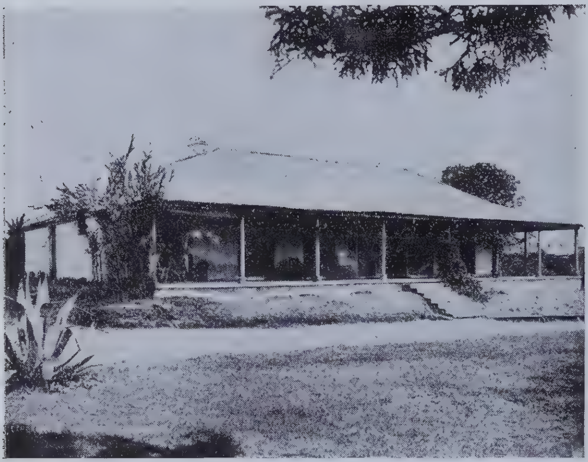
AUSTRALIAN TOWNS WITH A HISTORY

BRIEF SUMMARY OF A LECTURE

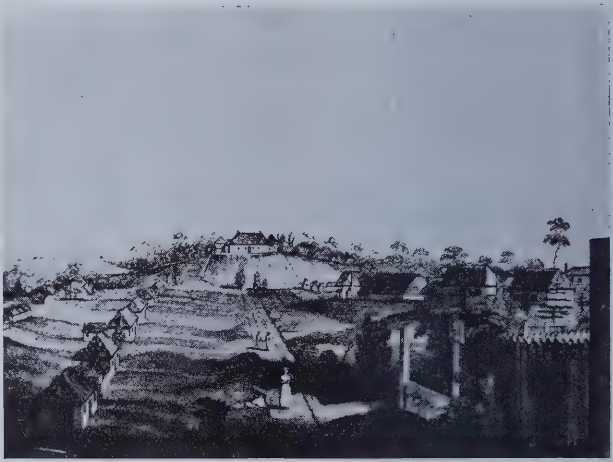
By FRANK WALKER

ONE of the most interesting phases of our history is the development of the older settled districts beyond Sydney and the evolution of the towns which belong to them. As such we have *Parramatta, Liverpool, Windsor, Campbelltown and Port Macquarie,* all of which have attained their century of age, and even more, whilst Parramatta is only a few months younger than Sydney. A connected history of the towns abovenamed could hardly be encompassed within the comparatively small limits of a lantern lecture, so that only a brief resume of the main facts which go to make their history is possible. Many of the places and buildings which helped to make them famous fortunately survive, making the task of description much easier than it would otherwise be.

Parramatta dates back to the very earliest years of settlement, and figures largely in the annals of Australian history. The poverty of the soil surrounding Sydney Cove when the first settlement took place induced Governor Phillip to commence the work of exploration at once, in the hope of finding better soil, and very soon after the landing the Parramatta River was entered, and explored up to its source. Here Phillip's practised eye soon noted the difference in the soil, and a settlement was formed at what was first called "Rose Hill," but was afterwards changed to its present name of Parramatta. The place soon assumed so much importance that at one time the question was seriously considered of making it the "Capital," Sydney taking second place.



"EXPERIMENT COTTAGE," PARRAMATTA.
ERECTED 1793.



FIRST GOVERNMENT HOUSE, PARRAMATTA.

Windsor, Campbelltown and Liverpool are "Macquarie Townships," and were all formed by that energetic soldier and administrator, Governor Macquarie, in 1820, Campbelltown being named after his wife, who was a Miss Campbell. An interesting fact in connection with the founding of Liverpool is that the authorities in those early days fondly hoped that it would become a great "seaport" like its namesake in England, but these sentiments, it is needless to say, ended in dreams.

Port Macquarie came into existence in 1821, following on Oxley's discovery of the River Hastings, its entrance to the sea being named Port Macquarie, in honour of the Governor. It was created a Penal Settlement in the above year, the first Commandant being Captain Allman, who left Sydney in the year named with a small company of marines and convicts. The most interesting personality connected with the old township was Major Innes, who, for a considerable time was Commandant of the Port. He entertained Governor Fitzroy in 1847 with elaborate and costly hospitality at his fine residence, "Lake Innes Cottage," some few miles from the Port on the lake of that name. Here the festivities were kept up for several days, the gallant Major actually importing "gondolas and gondoliers" from Venice, for use on the lake, during the vice-regal visit. In the thirties and forties Port Macquarie was a flourishing settlement, having long since abandoned its sinister beginnings. Many substantial buildings were erected, and trade with Sydney was frequent. It was at the entrance to the Port that Benjamin Boyd's fine vessel, the "Wanderer," was wrecked in 1851. St. Thomas' Church of England, whose foundation stone was laid in 1824, was finished in 1828, and at the present day, having been thoroughly renovated, is in excellent preservation. The old-fashioned "box-pews" have been retained, which are interesting relics of the past, and around the walls are some fine tablets to dead and gone worthies, who served their day and generation in the old township.

The history of Australia is absolutely unique in character, for its very beginnings are so near us in point of time that we can study them in a manner that is impossible with any other nation. A short hundred and thirty odd years is all that divides us from the days of the first settlement, and we must feel some degree of pride that in this comparatively short time we have made such wonderful progress. Australia also is the *only Continent in the world occupied by one people, living under one flag, and under one form of Government.* We must, however, give credit where credit is due, and the lives of our worthy pioneers, of whom any country in the world would be proud, deserve our most sympathetic study. It is they who have made Australia, and by their lives and works, have made possible the conditions we enjoy to-day.

Henry Kendall, one of our own gifted poets, in writing of these very men, says:—

> ". . . They are sleeping in the graveyards
> In their silent graves apart,
> Which, with empty arms and eager
> Would hold them to their heart.
> These Statesmen of the buried years,
> These loyal men long dead:
> Are they turning in their dreaming
> To the dull tramp overhead.
> When they pin the stars and garters,
> When they write the titles rare,
> The men who earned the honours
> Are the men who WON'T BE THERE."

MR. MUNNINGS: I have great pleasure in proposing a vote of thanks to Mr. Walker for his lecture. The views were interesting to me because I know so little of Australia and I had no idea that there were so many of these old type of buildings in the proximity of Sydney. They appeal to me because in a new country like this and in New Zealand one's history is so limited in its material expression. I always think, too, in looking at views of old buildings that if one tries to read history in the light of its own modernity, these photographs were in their own time modern expressions of the people who then lived, and we have to take lessons from these views and realise the fact that we

WINDSOR IN 1824.

"LAKE INNES COTTAGE," NEAR FORT MACQUARIE.

FORMER RESIDENCE OF MAJOR A. C. INNES.

too are making history, and it is up to us to see that we carry on in as strong and powerful a way as our forbears.

History is looked upon sometimes as a dry subject, and certainly it may be made dry, but in the way it has been presented to us to-night, I personally found it of intense interest. It has whetted my appetite, and I shall try to find out more about this wonderful country.

MR. SCOTT: I have much pleasure in seconding the vote of thanks. The lecture has been highly interesting. I have myself seen most of these places; I have been in Port Macquarie several times, and on one occasion nearly ended my days there.

On another occasion I was there while they were pulling down Innes' old mill. At one time one of the Innes' was the Governor, and he was searching very anxiously for some illicit whisky manufacturers, but he never could find them. Strange to say when the mill was being pulled down, the still was found in the basement, and in the wall was a flue shaped in such a manner that the steam from the brew was able to escape without being noticed.

I think we all owe a debt of gratitude to Mr. Walker for his lecture.

MR. HARRIS: I have pleasure in supporting the vote of thanks. Mr. Walker has shown us how these old buildings are falling to pieces, and I think we might see whether we could not do something to restore and preserve them.

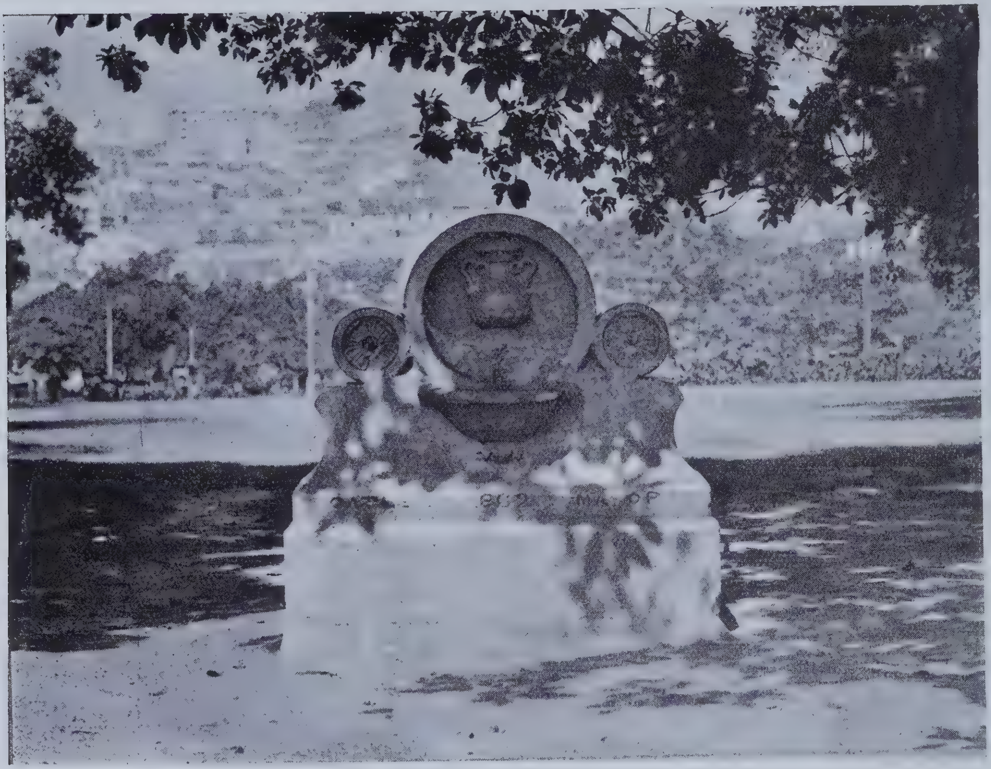
MR. ROBERTS: I have pleasure in supporting the vote of thanks. I was interested in what Mr. Walker told us about Dr. Samuel Marsden and the early days of the wool industry in Australia. Mr. Marsden's property in Penrith was named after the place where Moses kept his flocks. Marsden started growing wool there in the days when it was only thought to be fit to make horses' beds out of, but Marsden held different views, and he took some of it home to England with him, had it made into clothing, and went to visit the King in a suit made out of Australian wool. The King was interested and gave Marsden some of his sheep which he had recently got from Spain. Those sheep Marsden brought out and took to Penrith, and they were the origin of the flocks of Australia. When Marsden left this country he distributed these sheep amongst his friends, but I understand before he was outside the Heads the man who has the greatest credit of creating the industry, bought them all up and took them to Camden, and these sheep were the forerunners of the great wool industry. I would like Mr. Walker to look into this question.

CHAIRMAN: I would like to tell Mr. Walker of a relic of old times in Parramatta. The first Methodist Church in Australia was built by John Lee, at Castlereagh, but the first official Wesleyan Church in Australia was built in Parramatta by the Rev. Samuel Lee, and that building is still standing, and is used as a vestry of the Macquarie Hall to-day. The house in which Mr. Lee lived is still being used as the residence of the Methodist Minister. The walls are about two feet thick.

I am sure we appreciated going back into the days that are gone. We are possibly in this country somewhat lacking in reverence. It is well that we should get called back to some of the old things, and I am always glad to remember that one of the old Macquarie Churches, perhaps the best of them, is still standing, and I trust will remain for many years; I refer to St. James, in King Street. It is a lesson to me of classical architecture combined with a spire and worthy of Wren himself. We are deeply grateful for the information of interest given to us this evening.

MR. WALKER (in reply): Mr. President, Ladies and Gentlemen. I thank you extremely for the very kind reception you have given to my remarks. The history of Australia is absolutely unique in this respect, that it is the only Continent in the world governed by one people, occupied by one people and under one flag.

While we are naturally proud of our progress we must give credit where credit is due, that is to the pioneers who have made possible the conditions under which we live to-day. We reap the benefit of their splendid work. We have only got to read the records of these old pioners to realise that fact and yet they were in a way disinterested. I think that in anything connected with Australian history we should always give the best credit to the pioneers of the past.

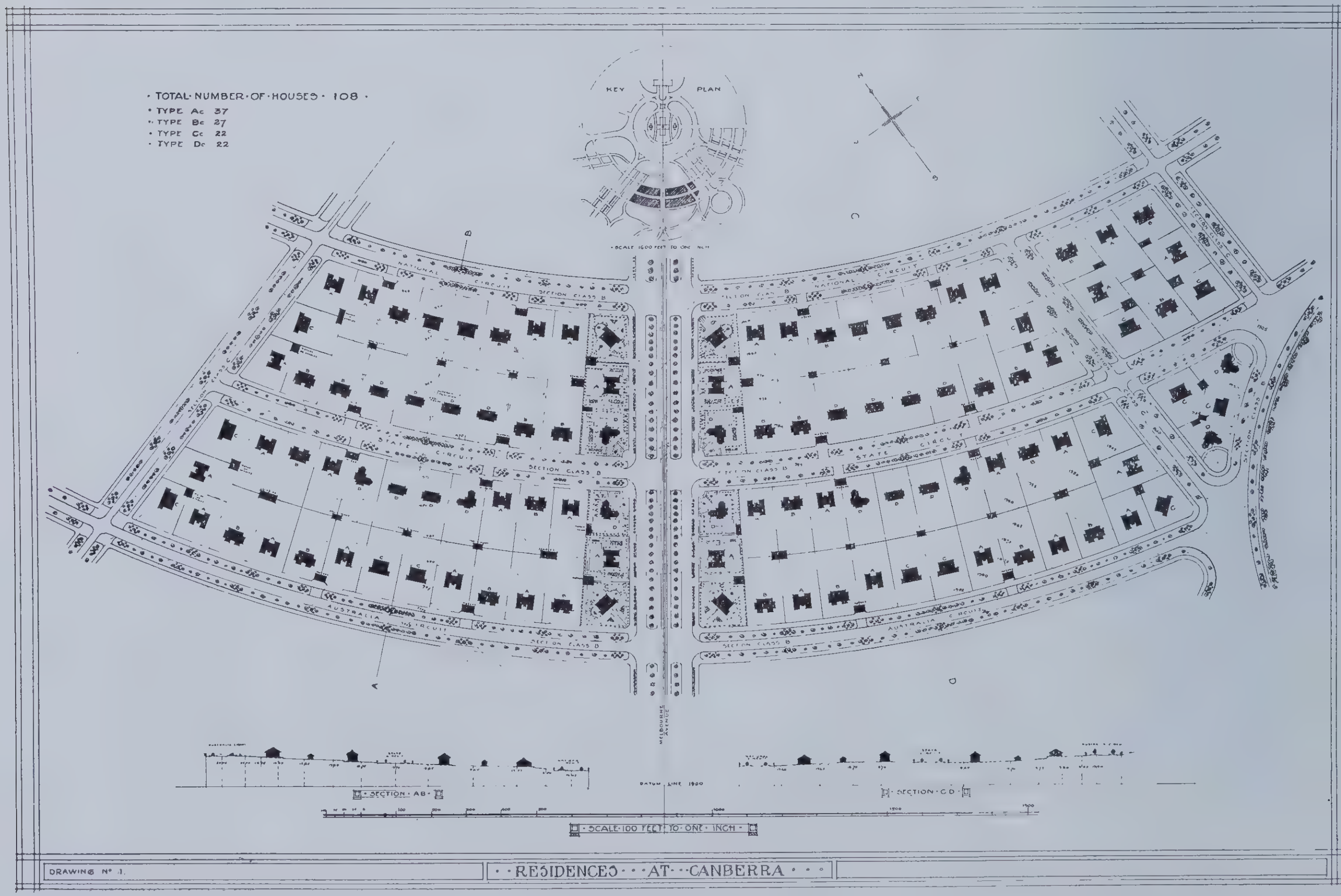


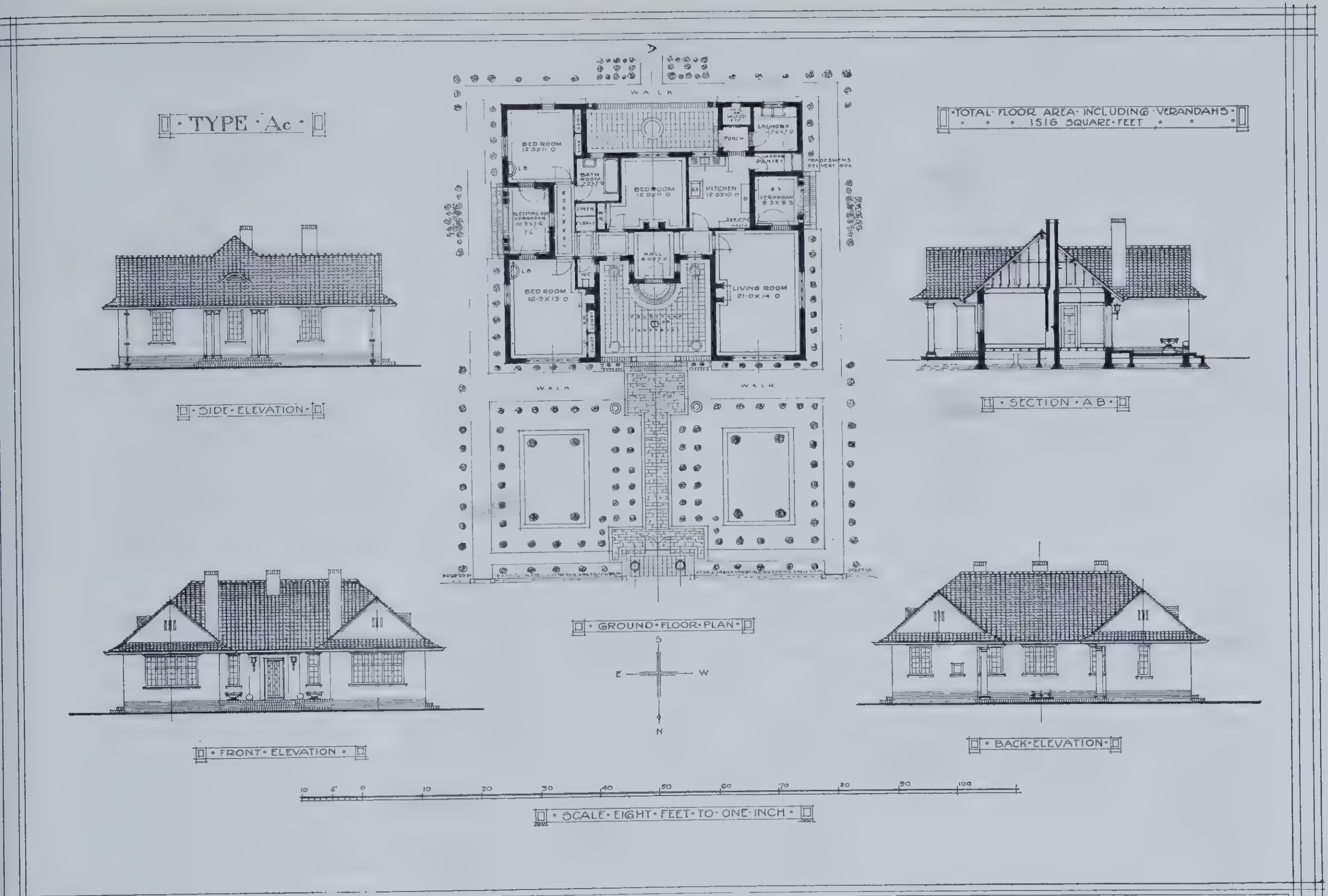
Old Street Fountain near St. Mary's Cathedral, Sydney.

Cazneaux photo.

The Premiated Designs which gained second place in the Canberra Architectural Competition for Residences.

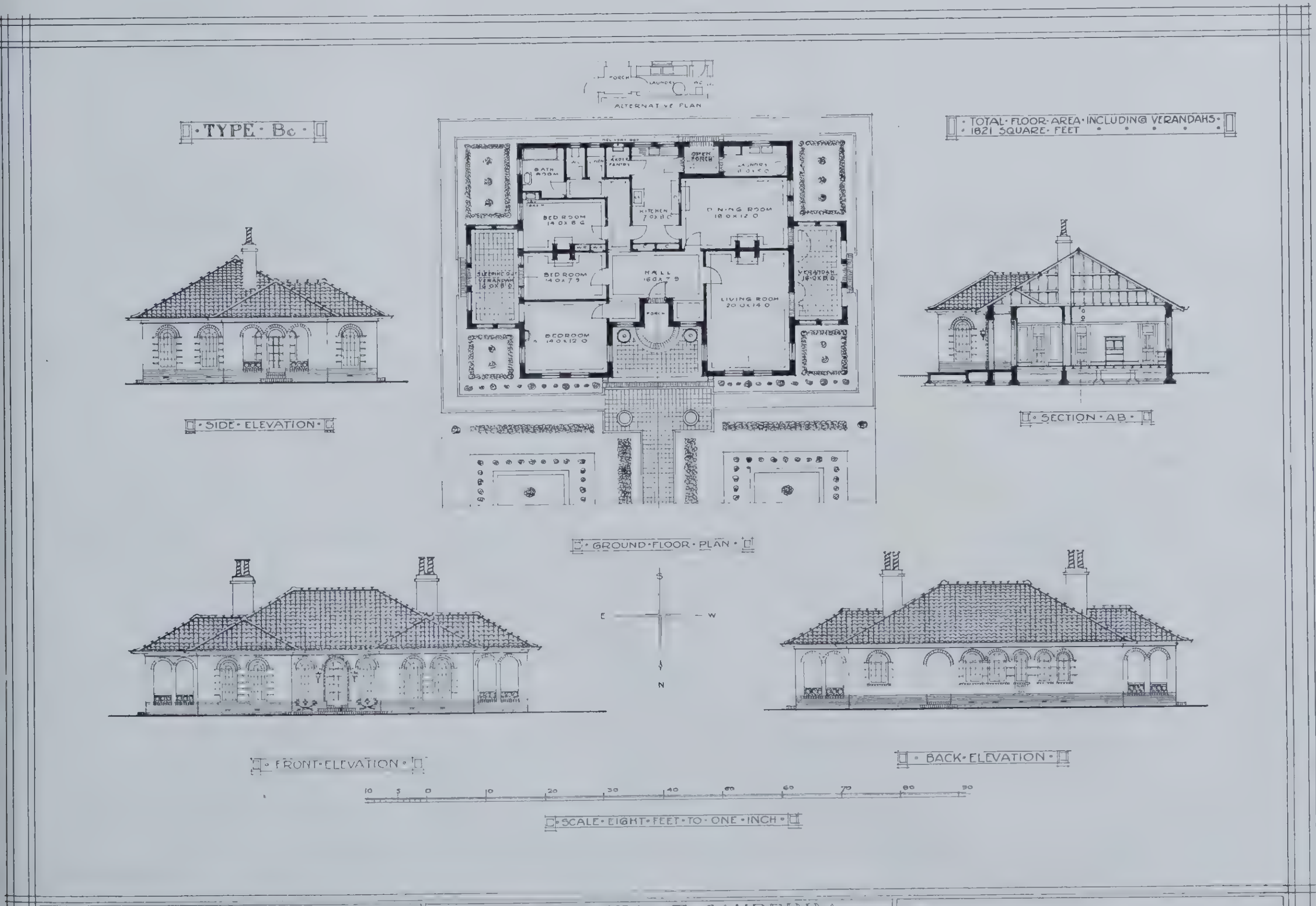
Designs by Mr. N. Hampson, Sydney.





DRAWING Nº 2

RESIDENCES · AT · CANBERRA

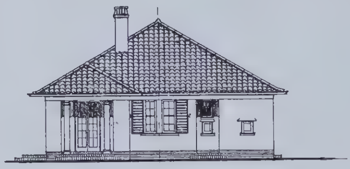


DRAWING Nº 3

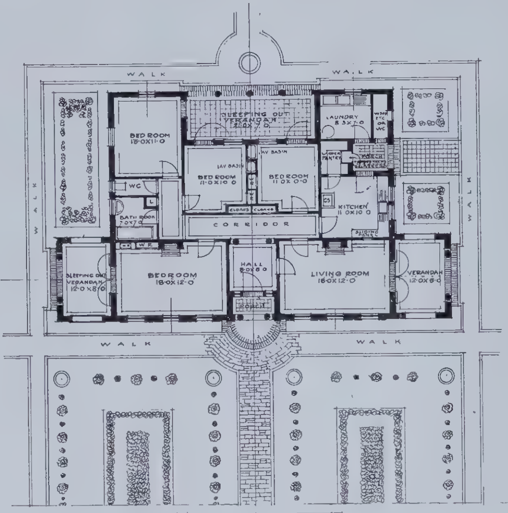
RESIDENCES · AT · CANBERRA

TYPE Cc

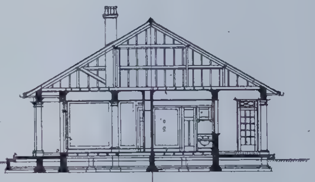
TOTAL FLOOR AREA INCLUDING VERANDAHS
1812 SQUARE FEET



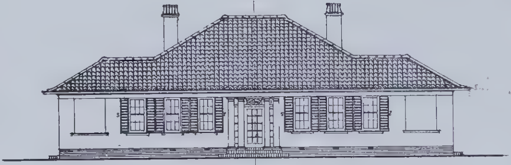
SIDE ELEVATION



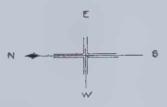
GROUND FLOOR PLAN

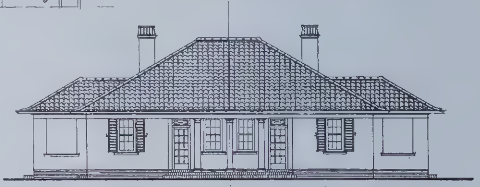


SECTION AB



FRONT ELEVATION





BACK ELEVATION

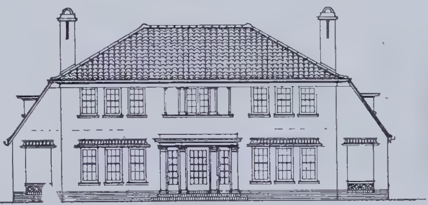
SCALE EIGHT FEET TO ONE INCH

DRAWING No 4

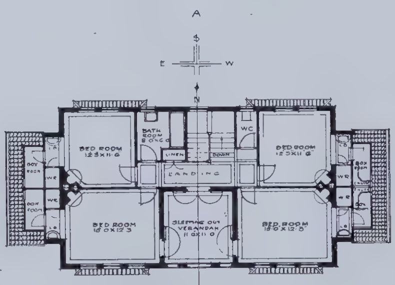
RESIDENCES AT CANBERRA

TYPE Dc

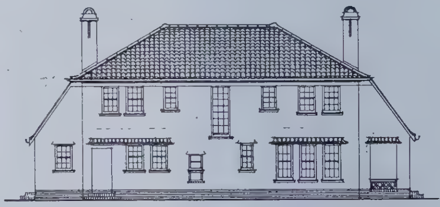
TOTAL FLOOR AREA INCLUDING VERANDAHS
2498 SQUARE FEET



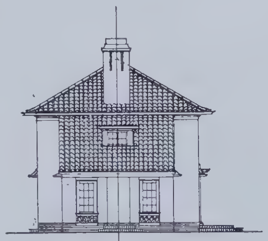
FRONT ELEVATION



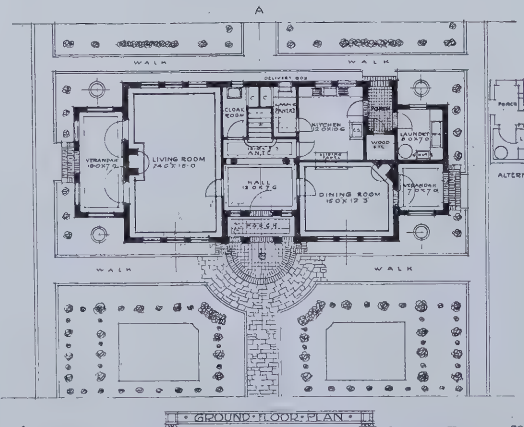
FIRST FLOOR PLAN



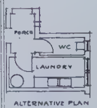
BACK ELEVATION



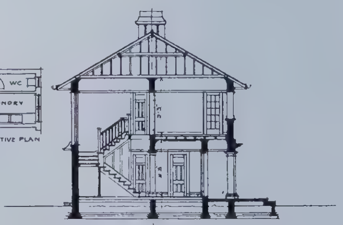
SIDE ELEVATION



GROUND FLOOR PLAN



ALTERNATIVE PLAN



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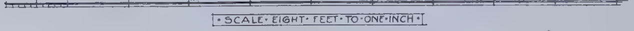

SCALE EIGHT FEET TO ONE INCH

DRAWING No 5

RESIDENCES AT CANBERRA

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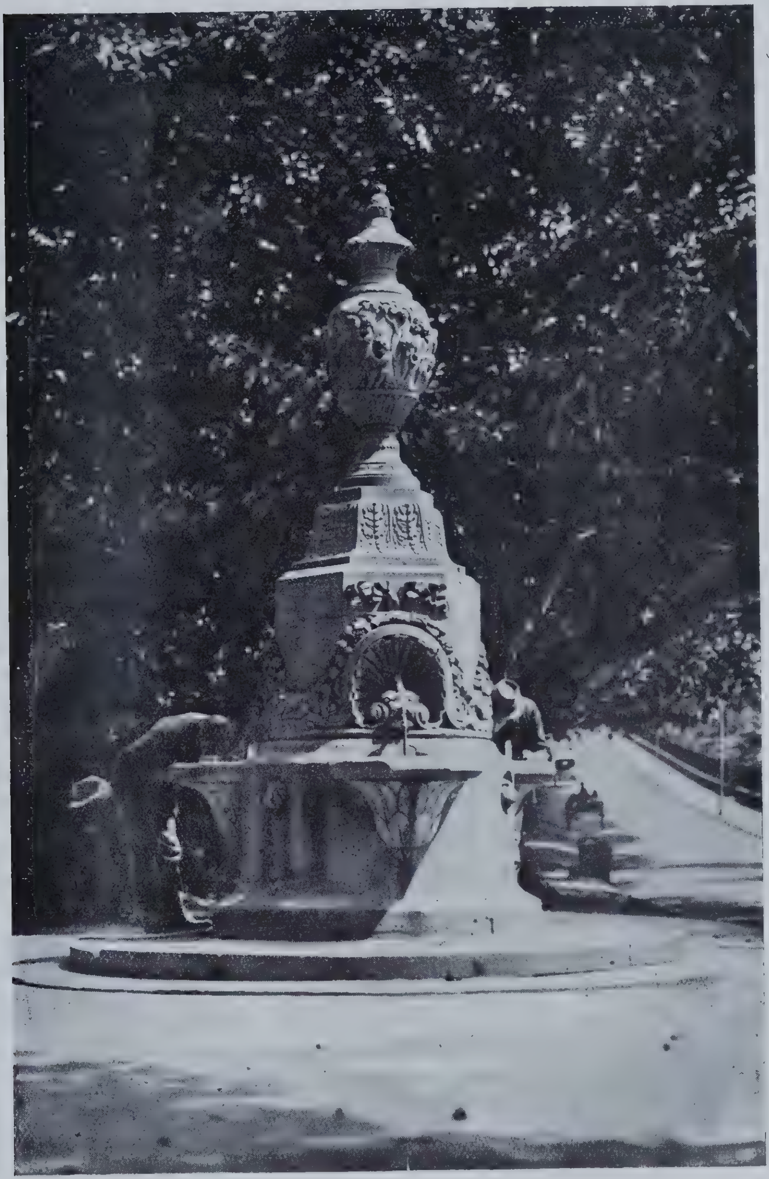
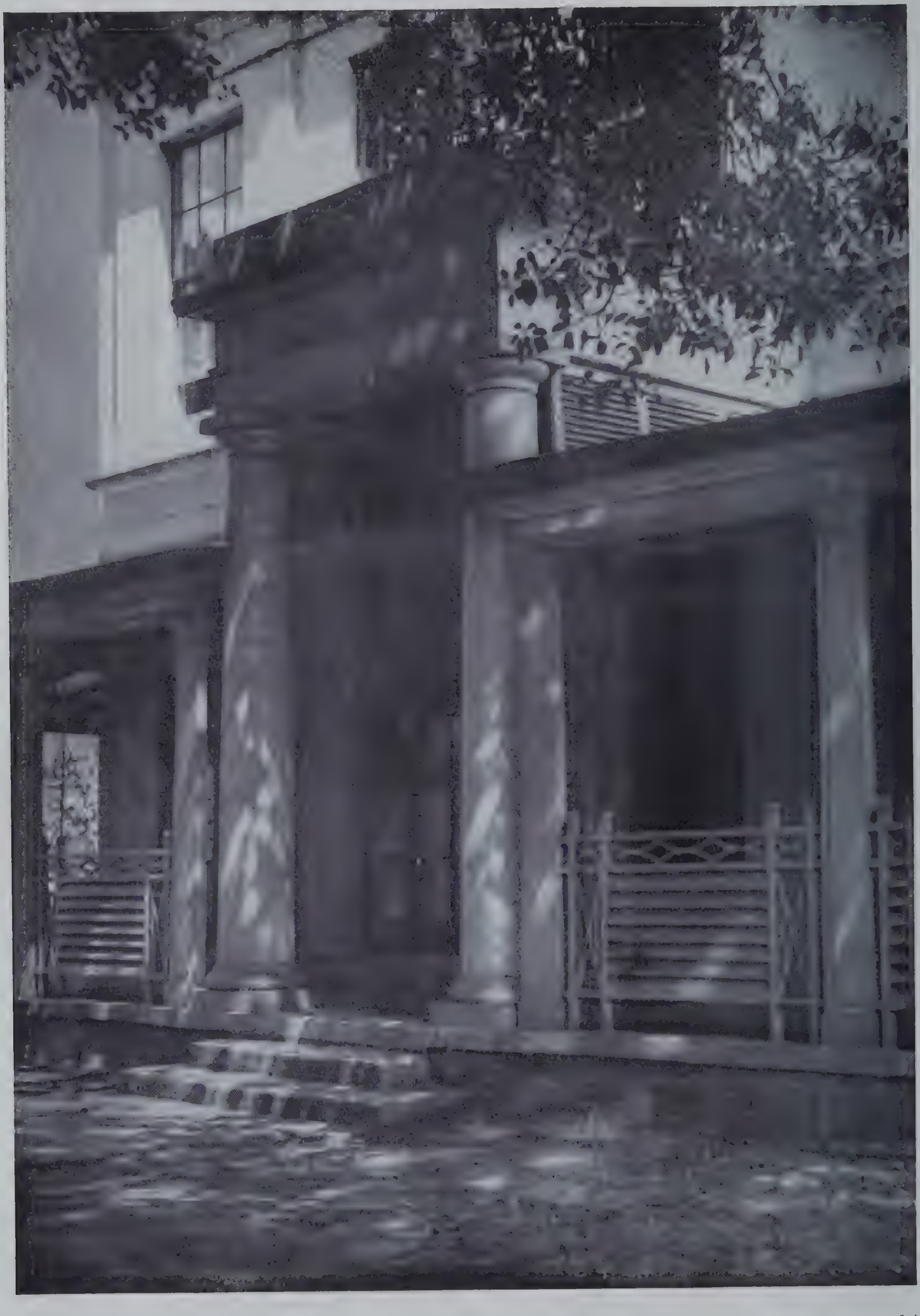


Fountain edifice in the Sydney Domain, close to the Botanical Gardens. It is perhaps the finest of its kind in Sydney on account of its delightful Renaissance detail, proportion and craftsmanship.



"ROCKWALL," POTTS POINT, SYDNEY.
Built about 1835.
Residence of Mrs. Russell Nolan.

Cazneaux photo.

ARCHITECTURE

THE JOURNAL OF PROCEEDINGS OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Vol. 13. No. 11. Registered at the G.P.O., Sydney, for transmission by post as a newspaper. November, 1924

INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES
ORDINARY GENERAL MEETING
1st SEPTEMBER, 1924.

Including a Lecture
By H. C. KENT

SIR CHARLES ROSENTHAL (in the Chair) announced apologies from Messrs. A. W. Anderson, E. H. Buchanan, W. Gill of Casino, and M. R. Mandelson.

The Chairman announced the death of Mr. Moorehouse, one of the members and suggested that a letter of condolence be sent to the relatives, which was agreed to.

The Minutes of last meeting were confirmed.

Referring to the third item on the business paper, the Chairman said: You will remember a Board was appointed some time ago to deal with the registration of Architects. That Board has scrutinised the qualifications of architects throughout the State, and has, I think, finalised its approval of those who are to be registered, and they have been registered, and their names gazetted. It transpires that the amount provided for by way of fees has proved to be more than is actually required for the working expenses of the Board. To commence with, the Board is to be complimented on the economical way it has carried out its work, and as a consequence there has accumulated a certain sum of money which goes into the consolidated revenue and is lost to the Board and profession generally. The idea was conceived that it would be a useful procedure to apply some of this money to travelling scholarships for architectural students. Mr. Godsell, our immediate past President, is Chairman of the Board, and at our Annual Dinner explained what was proposed to be done and what is being done, that the two best students from the University and the Technical College were to be given an opportunity of enjoying a scholarship and travelling abroad. The matter was referred to the Council of the Institute by the Board, and the Council dealt with the matter, and wrote to the Board, endorsing the action taken. (The Chairman here read a letter received from the Registrar.) The Council thought the scheme was worthy of all support, and by direction the Secretary wrote to the Registrar. (Letter in reply read.) That is how the matter stands as far as the Council is concerned. Members will be cognisant of the fact that about that time members of the Institute and Registered Architects who are not members of the Institute definitely expressed the view that it was wrong on the part of the Board to use money provided in this way for the benefit of architectural students, and that if a surplus of this kind should accrue, it was obvious that it was a fair thing to reduce registration fees. The Council felt that although this was a matter that should be dealt with by the Board, it was a fair thing that the Institute should invite an expression of opinion from its own members. We want members to be quite frank in their criticism, and let us know what is in their minds, and then Mr. Godsell will state the Board's point of view. The whole object of this matter coming forward to-night is to have it thoroughly ventilated. I hope that architects and the profession generally will support not only the action of the Board, but the action of the Council in endorsing what the Board is doing. I think our body ought to be big enough to allow the funds concerned to be applied towards helping those who are taking up the same calling in life as we have adopted, and to reap some of the benefits which we all realise can only come from travel abroad and the advantages associated therewith. If there are any members who feel that the course adopted is not the right one, we will be glad to hear their reasons.

Mr. S. A. NEAVE: Scholarships as far as they go are quite all right. We have no fault to find with them, but we do think it wrong that Registered Architects should be compelled to pay approximately £1/1/- a year extra annual fee to provide these scholarships. Members of the Board and probably a majority of the members of the Institute have got practices which return them quite a decent income. £1/1/- is nothing to them, but there are quite a number of registered architects who are "scrapping round" trying to make a living, and the £1/1/- is quite a consideration to them. I think it only just that these members should be consulted. I think at least before the Board should go ahead and constitute scholarships as a regular annual business, a referendum of registered architects should be taken, because I do not think that more than half of them are in a particularly financial position. The Board was created with the idea of registration, and there was no talk of scholarships till afterwards. The Board fixed a fee. It appears that the Board can reduce that fee without any trouble, and I think it only right that they should reduce it to a minimum. Quite a number of registered architects are members of the British Institute. In my own case I pay £6/6/- to £7/7/- a year in subscriptions. The Board certainly sent a circular letter round, but I had no idea that they were empowered to fix the fees. I thought it was an Act of Parliament and we had to pay. It is not the Board's business to create scholarships. If the wealthy members of the Institute feel inclined to form scholarships, let them do it, but to compel draughtsmen to pay £1/1/- a year to create these scholarships is completely wrong.

(THE CHAIRMAN read letters from Messrs. W. Gill and M. R. Mandelson objecting to the scholarships.)

MR. WRIGHT: I fail to see in regard to scholarships that any student, until registered, comes within the Act. (Speaker quoted a clause in Part 5 of Section 25.) The Minister has written to me as Secretary for the opponents of this method of raising scholarships. A petition has been sent round and signed by 190 Registered Architects out of 210 interviewed. I submit the principle of associating educational matters with a compulsory registration fee is unsound. I maintain that this Institute is the body that should make provision for these scholarships. We should be able to largely increase the membership, and when that is done, I see no reason why those funds could not be raised. If we can afford to pay them under this Registration Bill, surely we can afford to give the money on a voluntary basis. The compulsion is unjust. I would ask the President of the Board if he could make some arrangement that the whole of the Registered Architects should be consulted on this matter. If they are in agreement I am in agreement, but I think the Institute is the proper body to raise the money.

MR. E. A. SCOTT: I consider that the use of this money for the purpose of education, seeing it would otherwise have been lost to architecture, was right and proper. It has to be borne in mind that they have a surplus now, which they will not probably have in the future. We have to remember that there was a registration fee of, I think, £3/3/- as well as the annual subscription. In later years they will have less money at their disposal, and I cannot see what better use could be made of this money than by assisting young architects in the profession in their education. It has been said that the Institute is the proper body to do it. It never has the money, and if we rely on voluntary subscriptions, we will never have the money. Further than that, the fee of the Institute is going to be cut in half, and I am seriously exercised over the financial position of the Institute. There is talk of the amalgamation of the two Associations. When we receive the Association of Architects into the Institute, it will do a great deal of good. We will find it difficult to finance our undertakings. In the past we have had a close call with our subscription of £4/4/-, and members will have to seriously consider what we will do when our subscription is reduced to £2/2/-. There will be no money to spare for scholarships. It is about time the architectural profession woke up to the fact that they owe a debt to themselves and to the younger men coming on, and the subscriptions are not too high. It is not the wealthier men in the profession who subscribe most liberally to the Institute. It is the men with moderately small practices who do the work and give their time. For many years since I have been associated, it has been half a dozen members who have carried the baby all the time. Members are inclined, when anything arises to irritate them, to come here and slang the Council, but when things go smoothly, they are not too ready to come and help the Council to carry the burdens. We are told that so many members signed this petition. Where are they? They ought to be here. I am thoroughly in favour of the action of the Board.

MR. ROBERTS: It seems to me that the policy acted on is one of handing the power over to the Board, so that the Institute becomes an inoperative body. I am struck with the fact that the correspondence read points strongly in that direction. Personally I think the body to act is the Institute of Architects and not the Board. The Board is there to deal with registration of Architects, and the question of policy is a matter for the Institute. I say that the policy laid down in the Bill should emanate from the Institute and not from the Board. The Board is there to administer the Bill and not to create it. The recent policy that has come into force of handing the work of the Institute over to the Board is an absolute surprise to me. I think that some of the expenses connected with the getting of the Bill through should come out of this surplus money, and that the Institute should be reimbursed for any expenses that it has been put to.

MR. DOBSON: (Read a paper and quoted at length from the Act.)

MR. KETHEL: I was an outlaw who signed the petition, and I did so with sympathy. The Institute itself admits that these fees are too high. Apart from that I had two other reasons which were sufficiently serious to make me sign the petition. First, we all object to taxation. If there is to be a taxation body, it should be the Government itself. Why should the power of taxation be handed over to a Board (I say it with all respect), a majority of whom do not represent the profession. These men are going to have handed over to them the power to tax the practising profession. The second reason is that I think the fundamental principle of all taxation should be that no authority should be given any body to tax to raise a greater revenue than is sufficient to carry out its governmental duties. If the Board is raising more than necessary, I think for that reason alone I was quite justified in signing the petition.

THE CHAIRMAN: The reason the Institute is recommending that its fees shall be reduced is that we might have a common basis on which we could effect union between the Architectural Association and ourselves, and not because we think the fees are too high.

MR. CLAMP: I agree with the action of the Council in this matter. I was one of those 220 who were approached with the petition, and I refused to sign it on this ground: has the matter been referred to the Institute? I took it that it was not a matter for carrying round, but was one for the Institute to deal with. We agree that the Council is the governing body, but think it would have been nice if the Council had taken the opinion of the members before they took the action they did. I told the gentleman who brought the petition round that I would not sign it until the Institute had given its decision on the matter. I did not know until I came here to-night that the Council had already agreed to it. I thoroughly agree with the action taken by the Board that rather than lose the money, we should use it for some good purpose.

(In reply to the Chairman, it was stated that 43 members of the Institute signed the petition.)

MR. SPARKE: I hope those who are here in opposition to the Council's confirmation of this idea of scholarships will not take it that we are against the Council. If this had been a vote of want of confidence in the Council, I should have had to vote against it. I believe the members who signed that petition have also that view. The members of the Board are paid for their services, and they have put their time into this matter. They have not looked sufficiently in the first place into the finances. They are there to protect the public in regard to the admission of architects. There was no necessity to run beyond that in the carrying out of the Act. If proper investigation had been made into the running of acts elsewhere, it would have been found that £1/1/- a year would have been sufficient, as it is in Victoria. In Africa, America and New Zealand the expenses of registration do not exceed £1/1/- a year. We are not against scholarships, but in our time we had to buy our own. In regard to the interpretation of the Act, we were advised that we were not safe until we became fully registered. The matter was not put clearly to us. I think the Board would be more within its mark in keeping to the work of amending the Act in such a way that only Architects who are fully registered can submit plans to the Council at all, and that the scholarships should come out of other funds. We are against them coming out of our funds. I speak of assistants, many of whom are only on a salary of £5 or £6 a week. I say it is not fair that we should be called upon to pay for scholarships for sons of fathers who are better able to pay than we are.

(The question was asked, "What position do the pupils in private offices stand in regard to these scholarships?" The speaker remarked that it seemed unfair that University and Technical College students should get preference over those in private offices. He thought the Institute made a mistake in not submitting the matter to the architects before taking the step it did.)

THE CHAIRMAN: The scholarships have been awarded to the best students at the University and the Technical College. Ninety per cent. of the pupils in offices are students at the Technical College.

MR. PEDDLE: The idea of providing scholarships out of the funds of the Institute is absolutely impossible. All the funds have not been able to pay the necessary expenses. We cannot increase the fees and we cannot do more than we are doing with the fees that we are receiving. One thing which seems to have been largely lost sight of is that this money was to go into the consolidated revenue. This Board has, by its perseverance, secured it for the benefit of the profession. I think a great many of our friends do not realise that it only amounts to 4½d. a week, an amount so small that one can hardly understand any one objecting to contribute it.

MR. WATERHOUSE: Personally I regret the method adopted by those who signed that petition, because primarily I take it the object of this small amending bill is to bring about proper control of any fees which the Board may collect, not specifically to establish travelling scholarships, but for the advancement of Architecture. If the members who signed that petition had thought for two minutes, they would have realised that the proper method would have been to elect two members and get them to put their views logically, clearly, and concisely before the Board, and impress them with the necessity of not establishing scholarships, but using the surplus funds for the reduction of fees. It will be necessary from time to time to make the bill a more complete weapon than we have at present. For the sake of a small sum, we are running the risk of jeopardising the bill in question by a referendum. I think there are about 650 registered architects. Is it fair that a vote should be taken among registered architects only? If taken, a vote should be from the whole of the architects.

MR. GODSELL: The old saying that "if Mahomet won't go to the Mountain, the Mountain must go to Mahomet" seems to be illustrated here to-night. These gentlemen who are objecting to the Board's action have so far side-stepped the Board, and the Board had to come here to learn what their objections are. These gentlemen have never come to the Board; they went to the Minister. The whole thing would have been cleared up and probably never heard of, if the Board had pursued the even tenor of its way and merely registered Architects. The Board found that the funds subscribed had gone into the Consolidated Revenue, but that these might possibly be retrieved and become a foundation for better activities by the Board for the advancement of architecture. Therefore, personally, with the consent of the Board, I went after that money, and I was told it would be much better if I asked that the Board might have control of all funds which might accrue in the future. Therefore, a simple amending Bill was framed by the Board merely asking for the return and the control of these funds. The State Treasurer told me that those funds had passed into the Consolidated Revenue, and we had no hope of retrieving them, but, after consideration and an earnest conference with Mr. Bruntnell, the Minister for Education, under whose Department the Board acts, the Treasurer consented to return those funds if the Cabinet and Parliament agreed. Meanwhile, there was a question whether the Board could obtain a grant of scholarships from the Government, and the Government has granted these two scholarships, not out of the funds received by the Architects, but by the Government itself under the Education Department. If these gentlemen had come to the Board and kept their tongues quiet outside, probably the whole of the funds would have been returned to the Board; but they would not come to the Board, but tried to jeopardise the Bill which the Board had worked for. The Bill says, "Any surplus moneys from Architects' fees which are not required for the paying of expenses may be expended by the Board for the purpose of the advancement of architecture in such manner as it may determine." Under the Amending Act, while the Board would be under the protection of the Government, the Board would never be under the control of the Government. The Board has never said that it would not reduce the fees. The Board waited until it had control of its own funds to see what surplus there would be, and what revenue from capital, before proceeding to say how much would be necessary for the purposes of the Board. One of the speakers this evening complained that the Board had done nothing. Why, he asked, had the Board not framed a by-law to prevent plans being prepared by unregistered Architects to be received by Municipal Councils? That is untrue, and it shows ignorance and want of faith in the Board. There was before the Board such a resolution, framed and introduced into this Act. It was not proceeded with because there would have been opposition, which we did not want from either side of the House before we obtained the control of the funds. The worst thing I have heard to-night is a complaint that the Board is paid for its services, and has done nothing. The Act provides for 25 meetings of the Board at £1/1/- each annually. These were 76 meetings for the purpose of registration in one year. I have never made a shilling from anything I have done in any shape or form on this Board, or when I was President of the Institute, and I have returned to this Institute all the fees I received during that period for official work. Others have done the same. I established, when President, a small endowment fund; none of the members have ever come forward to put another shilling into that fund. It was through Mr. Nangle and myself that registration came about. If it had not been for Mr. Nangle, the Act would never have come into force. It was only on our urgent plea that the Minister agreed not to consign it to the waste paper basket, and then we got a portion of the Act through. And at every opportunity since then I have tried to get amendments through. Just at the termination of my period of office, just when I was succeeding, this opposition came, and an effort was made to undermine the whole of the sacrifice of time that had been given for three years in trying to push on this work. Do you think that I like, at my age, sitting up at night drafting addresses to the Minister? Do you think I want to do your work other than so far as I consider it is a duty? Somebody has to do the duty work. The Board does not require, and never will require, anybody to pay more than they can afford. If a person is feeling it a hardship, he can come and put his case before the Board, and the Board will have every sympathy with him.

COL. WELLS: Knowing how serious and important this matter is, I have committed my thoughts carefully to paper. (Read paper.)

I can assure you if the policy of the Board in this matter is going to be interfered with, you will never get any good work out of it. No Board can be any good unless it is in a position to do something. It could sit back now and do nothing, but we have worked hard, and we are still willing to work in the interests of the architectural profession, and particularly for the younger members. You have to vote for either stagnation or progression.

THE CHAIRMAN: What has been said to-night has not altered my view. We appreciate the point of view of those who have spoken. The question involved is one of principle. I think we might reasonably ask those who think differently from us to give the scheme a trial. It is rather interesting to note that in the Institute we have 260 members, and about 50 present to-night. Over 200 members then have evidently felt one of two things. Either they have been too careless or too disinterested to make any move, or else they have agreed with us. 43 members of the Institute have signed the petition, and I know there are a number here to-night who did not sign it. It is clear that some who did sign have not thought the matter of sufficient importance to bring them along. Before a man signs a document, he ought to hear both sides. I am glad there has been so much said about it because ventilation is good.

MR. SPARKE: In the first place Mr. Godsell said nobody had approached the Board. None of us intended passing over the Board. There were two petitions got up. I wrote a private letter to the Board because I did not quite agree with either of the petitions. I received no acknowledgment. In the second place, Mr. Godsell has said we did not give the Board a chance to say whether they were going to reduce the fees. Surely Mr. Godsell will admit that the Board did work towards getting the idea put through that plans should only be passed by Architects who were registered. We were not to know that they were not doing this publicly. Finally, the Board was paid; in fact, we considered they should be paid if they were doing the work. Mr. Godsell has shown us to some extent that they were doing the work, but he did not let us know this before to-night.

MR. GODSELL: It has been said that the Board should make public what it is doing. Those who realise the difficulty of getting through Parliament a troublesome measure, will know that lots of members would immediately have constituents round him trying to down the work of the Board. If the Board was to make public what it is doing, it ought to be sacked. The Board should fight the thing quietly and bring it on without any talk. Too much yap and too little work has been the undoing of the architectural profession, and it behoves the Board to say little and to do the best it can for the profession.

Another thing, the Act provides not only for the registration of Architects, but that the Board shall regulate the practice of Architects and other purposes connected therewith. The Board claims that the advancement of Architecture, and of those who are coming along in the future, is part of the work for which the Board was constituted.

MR. LOUAT: I was one who signed the petition, but after hearing the other side, I regret having signed it. If I had known what I have learned to-night, I would not have signed it.

(The question was then put by the Chairman, and carried in the affirmative on a show of hands by 34 votes in favour, and 8 against.

THE CHAIRMAN then briefly introduced Mr. H. C. Kent, F.R.I.B.A., F.I.A., mentioning that he was the oldest practitioner of Architecture in the State.

Reminiscences of Building Methods in the Seventies under John Young.

LECTURE

By H. C. KENT

Mr. President and Gentlemen,—
When I undertook to read a paper under the above title, my purpose was ***Entertainment*** rather than ***Instruction,*** and it was not until I received the notice of this Meeting that I found that the chatty reminiscences with which I proposed to entertain you this evening had been accorded the status of a "Lecture," by which time my paper was already written.

If, therefore, you find it lacking in either the dignity or the erudition with which one is accustomed to associate the title "Lecture," you must put it down to the perhaps flattering misapprehension of those who evidently anticipated words of wisdom rather than entertainment.

I HAVE thought it may be interesting to you to take you back to building methods as they were nearly half a century ago, so that you may compare them with those of the present day. You see I have grown to old age in the profession, and old men as you know are apt to be reminiscent.

Before I discuss the subject of my paper, however, it is to some extent necessary to explain how I came to enter the employment of a Master Builder, a course which I may say I have never since regretted, as it gave me an experience not only in regard to materials and construction, but also in dealing with men both individually and in masses, which has, I think, been most valuable.

At the risk, therefore, of being somewhat autobiographical, which I am sure you will believe I do without being egotistical, I may begin by explaining the circumstances which led me to this course.

I am a parson's son, and at the beginning of the 'seventies, when a poor parson had given his eldest two sons a University education, he had done more than most parsons at that time could afford, as Dr. Badham's earnest plea for bursaries had not then materialised. Consequently if one desired to enter a profession requiring a premium, one had first to earn it, and both my brother and myself did so by teaching for three years.

At the end of that time I had, with care, saved about £300, and was about twenty-two years of age, as I had graduated when I was a little over nineteen.

Having decided upon Architecture I had, for a year or more, been reading what literature was then available, and here may I be pardoned for suggesting to our younger men what enormous advantages they possess to-day in the admirable modern text books and other literature upon the subject, as compared with those days, apart altogether from University and Technical College courses.

Beyond Ferguson's three volumes on the History of Architecture, which I read right through, and old Gwilt's Encyclopedia and Bloxham and Parker and Pugin and Brandon on Gothic, there was not much practical published information, and I therefore "swatted" away largely at Gwilt's, History, Theory, and Practice of Architecture, working out his applied mathematics, which I was competent to do on my own as I had passed first-class in Mathematics at the University, and had taken the same subject for my M.A. degree.

Ruskin also, with his principles which remain eternal, though mixed with what some may regard as cranks and fads, I carefully read and still sometimes read, enjoying his chaste and perfect English, for which alone he would be worth reading.

I had also, of course, invested in a box of instruments, and had been privately practising drafting.

With this somewhat mixed equipment I looked round for the next step.

At that time the principal practising Architects in Sydney were Mr. Mansfield, Mr. Rowe, dear old Mr. Blacket, Mr. Horbury Hunt, Mr. Albert Bond, and Mr. Backhouse, who had recently come from Queensland. Mr. Wardell came here from Melbourne, I think in 1879.

I tried Mr. Mansfield first, but he asked a premium of £250 without any salary unless in my fourth year, and though my £300 would have enabled me to pay the premium I could not live on the £50 balance for three years.

In later years when I knew him well and intimately I told Mr. Mansfield that considering the circumstances I had always thought he might have made some exception in the case of one who was not a boy in his teens likely to waste time and tracing cloth, and he agreed with me.

I next tried Mr. Rowe and Mr. Blacket, neither of whom had openings, and then, my father having moved to Melbourne, I went there and tried for openings but without success.

Somewhat depressed I came back to Sydney and talked the position over with Mr. Josiah Mullens, an old and intimate friend of my father, and he it was who first suggested a preliminary course with a Master Builder, and as soon as he did so I thought at once of John Young whom I had twice met and talked with on steamers between Sydney and Melbourne.

"The very man," Mr. Mullens said, "I don't know him, but John Fairfax does, and he will speak for you," which indeed dear old Mr. Fairfax did, for he gave me so flattering a letter of introduction that I almost blushed on presenting it.

I met Mr. Young at St. Mary's Cathedral, which he was then building, delivered my letter, and told my story.

"Come to me" he said, "and I'll make an Architect of you. I was originally trained in an Architect's office, but found contracting would be more profitable." I was just going to say to him, "What about premium Mr. Young?" but altering my verbiage, I said, "What about *terms* Mr. Young?" He looked me up and down, and said: "You are twenty-two and an M.A. Mr. Fairfax says, I'll start you at £2 a week, and if you are any good, you will soon be earning more than that." And so it proved. My small capital remained to the good.

This was in 1876, when Mr. Young, who in earlier years had built St. John's College, the first half of the Post Office, the then Sydney Railway Station, the old Exhibition Building in Prince Alfred Park, and Farmer and Co.'s earlier building, was just commencing the Lands Office, for which he had signed the contract a few days earlier, and thenceforward for between six and seven years I remained with him, and became fairly conversant with all branches of the building trade, including quantities, being employed on the Lands Office, St. Mary's Cathedral and other city buildings, and later on the then new suburb of North Annandale, which Mr. Young at first bought as a private venture, but afterwards turned into a company, and a very successful company too, and still later on a most interesting building enterprise, viz., the erection of the Garden Palace for our International Exhibition of 1879, of which, if time permits, I shall speak more fully at the end of my paper.

Mr. Young was, I may say, a man of many activities, and was at that time Chairman of the Omnibus Company, for which later I had a good deal to do with designing Omnibus Stables, etc. Later he became one of our City Aldermen, as well as Mayor of the new Municipality of Leichhardt, and after I had left him he was (I think in 1887) Mayor of Sydney. His recreations were bowls, billiards and flower culture. His hot houses later at Annandale were a perfect glory.

Before speaking of building methods may I say just a word about the Master Builders of those days.

Three years previously, in 1873, John Young had been largely instrumental in founding the Master Builders' Association of New South Wales, of which he was the first President, and at the time of which I speak, the leading builders with whom I came in contact included William Wallace, Aaron Loveridge, John McLeod, Jones and McIntyre, U. W. Carpenter, the McRedies and the Elphinstones, honoured names, some of which have come down to and are worthily maintained in the present generation. Alexander Dean had not then risen into his later prominence as a Master Builder, but had large joinery works.

But now turning to the specific subject of my paper, I propose to speak shortly under each of the following headings, viz.: Quantities—Setting Out—Brickwork—Iron and Timber Work—Plaster Ceilings—and then to conclude under the heading of exceptional construction with some account of the building of the Garden Palace, and a brief mention of John Young's City Railway scheme, which was well worthy of special notice.

1. *Quantities.*—Of course you are all aware that Quantity Surveyors as we now have them in our State are of comparatively recent date, though I am sure you will all agree with me that under our present reliable and efficient members of that Association the existing system is working most satisfactorily.

At the time of which I speak however it was the general custom for every tenderer for a building to take off his own quantities, although Mr. Chas. Mayes, who published a Building Prices Book used to take off Quantities more especially of Government works for some Contractors.

Mr. Young, however, always took off his own quantities, and many evenings I spent at his side (this often fruitless Contractors' work being always night work) over different buildings, e.g., the A.M.P. building, and later when I had become conversant with his methods, worked by myself even over so large a job as the Callan Park Asylum, which topped two hundred thousand pounds, and which, with much anxious care, I took off single-handed.

In connection with this last-named building, in order to more accurately price the large quantity of somewhat unusual stonework, I got Mr. Young to let me put three masons (one extra good, one medium, and one improver) on trial work for a fortnight on this class of stonework, which stones of course were not wasted as we were able to use them in our North Annandale building operations.

Masons' wages, I may mention, were at that time 11/- a day for special men, 10/- for standard men, and from 7/- to 9/- for improvers.

Before leaving the subject of Quantities I may tell you a story of a mistake in this connection which had rather far-reaching results.

Mr. Young and Mr. Eves (then the Clerk of Works at St. Mary's Catherdal) had together taken off the quantities for the Lands Office, and when I was put in charge of the Contractors' Office at the Lands' Office, I suggested to Mr. Young that it would be a good thing to enter up the quantities in a book, leaving blank pages opposite each item for comparison of the actual cost with the estimated cost.

Mr. Young thought the idea a good one, and brought me the quantities which were on loose foolscap sheets, and in entering them up in my book I found an item of 10,000 cubic feet of stone that had been added up in the 1000 column, thereby causing an error on the wrong side of 9000 cubic feet of stone, which at 4/- means £1800. I took the blessed thing home and went over and over it again to satisfy myself that I hadn't found a mare's nest, and then I rather apologetically brought the matter before Mr. Young. He very seldom used strong language, but when he had satisfied himself of the error, he did so over this.

However, he was a man of resource, and a day or two afterwards he came in and said, "I have been thinking over that mistake in the night. Look, we must try and make a set-off against that amount. Send to the Government Architect's Office and get all the details of the ironwork (of which be it said there was a great deal) and make tracings of them, and we'll get tenders here and also in England and Scotland."

Mr. W. Kemp, who was Architect in charge of the building, demurred to our asking for these details at so early a stage, but to make a long story short we got them after some pressing, and as there was no heliographing in those days, I had to trace them in triplicate, girders, roof principals, revolving dome, etc., and then we obtained tenders both locally and in the Old Country, with the result that the tender of a Scotch firm saved something like £1600 on the lowest local tender, which was not too bad.

Later, however, when Mr. Young put up in the *Protectionist* interest for West Sydney, the local ironworkers, who at that time were principally round the margin of Darling Harbour (West Sydney) raised an election cry of "What about the Lands' Office Ironwork?" and he lost his election and something like a third of the saving in election expenses.

Of course with the present day accurate Quantity Surveyors work, the only mistakes possible (we used to say that no big job was ever got but through a mistake) are in the pricing and carrying out.

2. *Setting Out.*—Any reference to Mr. John Young's building methods in the 'seventies would be incomplete without special mention of his very competent and very loyal general foreman at that time, Mr. Richard Nancarrow, a remarkable man and quite a character in his way, a Cornishman, full of strange oaths and strong language, underlying which, however, was the truest and kindest heart, as I very soon learnt, for he took a fancy to me, and helped me wonderfully, explaining everything to me in all details of work.

My first practical work was in setting out the Lands' Office with him, and I can guarantee the accuracy with which, thanks to him, it was done.

He always checked every rectangle, large or small, square or oblong by cross diagonals, a very simple and yet very effective check which I have since always used.

Afterwards at North Annandale I had plenty of practice in setting out, and at the Garden Palace on a very large scale. I remember starting it there on one of the hottest Anniversary Days I have ever known.

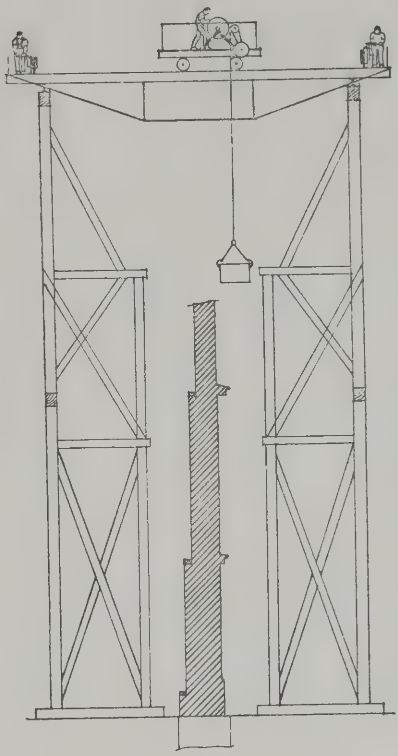
I shall refer to the setting out of full size details later under *"Masonry."*

3. *Scaffolding and Sheds.*—In the days of which I am speaking every stone building was not engineered as today from a central crane, such for example as you may now see at St. Mary's Cathedral, but was surrounded externally and internally with framed scaffolding carrying travelling beams and a crown carriage, and one of my earliest works was the making of drawings for this scaffolding, and for our sheds (of which I shall speak presently) and the setting out of the scaffolding with due regard to the internal walls.

The photographs which I now show you, but which were taken after much of the scaffolding had been removed, will indicate to you the method of scaffolding in those days. It was, of course, erected in tiers as the walls rose, and was constructed with cross braced framing for the first tier up to A-A, and later with trussed and cross-braced framing for the upper tier.
On top of the scaffolding ran the traveller formed with a pair of trussed beams with pulley wheels and crank handles worked from a hanging platform by a man at each end for travelling longitudinally and surmounted by a crown carriage for working transversely, that is by three top men for lifting each stone.

The erection of the upper tier of such scaffolding, especially the first sections, as you can well imagine, was rather anxious work, and was generally a job for Ship's Carpenters.

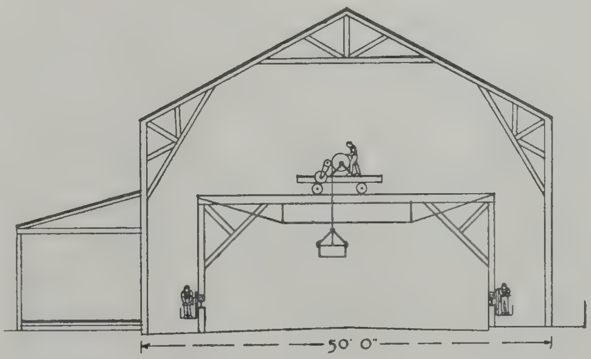
The scaffolding in the interior of the building had to be set out so as to interfere as little as possible with the internal walls, iron girders, etc., and as the building rose, had to be replaced where necessary with struts and braces from walls and girders and floor bearers.



In regard to sheds, in connection with the Lands' Office, we obtained permission to utilise for our stone yard, practically the whole width of Castlereagh Street from Bent Street to Bridge Street, providing only a 3ft. 6in. right of way along the Eastern side thereof for foot traffic.

A considerable portion of this street was roofed right over as shown in margin, with a very lightly constructed but remarkably strong roof of about 50ft. span, which so struck Mr. Barnet, the then Colonial Architect, that when designing the Garden Palace, to which I shall refer later, he brought Mr. Blackman, then in the Government Architect's office, down to inspect it, with a view to showing a 50ft. span roof of light construction.

Under this main roof slightly elevated plates carried tram rails, along which ran a traveller, stilted as shown, with a crown carriage on top for moving the stones (many of the blocks being very heavy) for the Masons' use.



From my office at luncheon time I overheard many very suggestive political debates in this luncheon shed, and the newspaper was always borrowed when Parliament was sitting, and the whole of the Parliamentary news read aloud in turn and freely discussed.

Mr. Angus Cameron, the first Labour member, who was paid £300 a year by the Labour Party (this being before the regular payment of members) used occasionally to come and ask permission to address the men in the luncheon hour, to give an account of his stewardship.

This was before he had become politically too educated for the Labour Party (as later also was the case with some of his successors such as Jacob Garrard and Joseph Cook), and had gone over to the Liberal party.

4. *Masonry and Marble Work.*—In the 'seventies Trachyte had not yet come into use. Granite, if not imported from Scotland, came from Moruya and Gabo Island (whence I think the Post Office columns came), while nearly all the sandstone for city work came from Pyrmont, principally from Sanders' large quarries, some lower portions of which bore euphonious names, such as "Purgatory" and "Hellhole," indicating bottom block stone.

I soon had plenty of practice in checking the cubing of stone for St. Mary's Cathedral and the Lands' Office.

Mr. Young also opened a Quarry at Lane Cove, near Fig Tree, but on the other side of the river, from which we supplied freestone for mouldings and dressings for St. Patrick's Cathedral, Melbourne, which he was also building at that time.

I had to pay occasional visits to Melbourne in connection with that building, which was being carried out under his brother, Mr. James Young.

We also supplied from Lane Cove stone to Adelaide for a large Bank, as well as to Newcastle and other places.

We had occasional use for Bluestone, which came to us from a quarry in which Mr. Young had an interest in Melbourne, and we generally kept a small stock at our Marble Works in Woolloomooloo Bay for emergencies.

Time will not permit my referring in detail to these Marble Works, where we did sawing and polishing, etc., and from which we supplied black and white marble tiles, as well as manufacturing marble mantels and other marble fittings.

Though we did plenty of marble sawing, freestone sawing had not come into practice in those days, excepting quite experimentally by Sanders, at Pyrmont.

Consequently a good deal of shaping was necessary very often before the finer Mason work began, and we had quarrymen, as we called them, some of them most expert in dressing down the blocks of stone with quarry picks ready for the Masons.

Many of the Masons also in those days were exceptionally good men, not a few of them being Scotchmen.

As I have already mentioned, Masons' wages at that time were 10/- per day for standard men, 11/- for special men, and from 7/- to 9/- for improvers.

I have spoken of our setting out floors for full size details, of which we had one at St. Mary's and one at the Lands Office.

Very often we received nothing larger than quarter full size details, from which we had to enlarge to full size on our drawing floor, and then to transfer to zinc and cut out templates for the Masons.

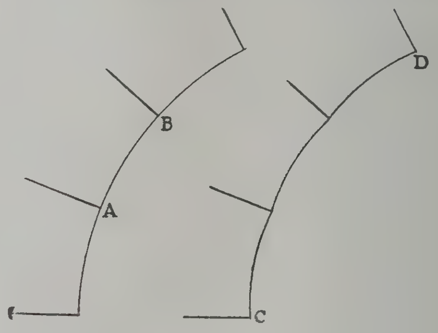
I may mention here a very practical and commonsense method of Mr. Nancarrow's in setting out full size details for arch stones, the independent voussoirs for which he always set out at a longer radius than the radius of the arch itself, for he had found by experience that nearly every Mason, while always carefully preserving the extreme points of a voussoir as at A and B tended to slightly hollow the intervening line, thereby producing a slightly cusped line C-D (exaggerated in sketch).

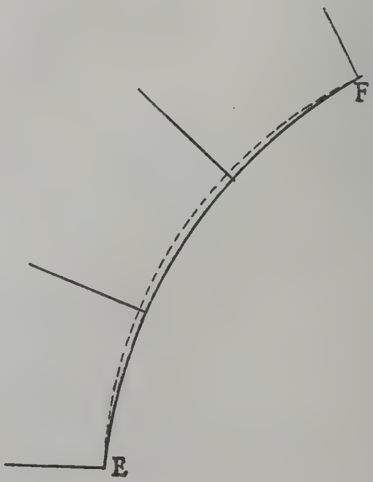
All the voussoirs of the arches at St. Mary's and at the Lands Office were set out in this way, the zinc templates being slightly straightened thereby, as in E-F.

I noticed at Lincoln Cathedral the fault which he thus guarded against. I mention Lincoln because when there I noticed how much of the interior of St. Mary's is on similar lines as well as the exterior of the East end of Lincoln, corresponding with the north end of St. Mary's, which you of course know is not oriented.

On the one side, occupying the width of the footpath, a lower lean-to roof covered our offices, and a large drawing floor for full size setting out, as well as a long luncheon shed for the employees with fixed tables and seats and copper and fireplace. I may say that Mr. Young always tried to make his workmen comfortable.

In regard to our sandstone, I may say that Mr. Young was always averse to undue rubbing which was very much in practice in those days, and also to deep throating





and undercutting, as he thought that the former disturbed the skin of the stone which the subsequent drying rotted away, and that the latter tended to excessive dryness, to which he put down the not infrequent fretting of the soffits of some of our cornices and other mouldings.

He was called upon to report on this trouble at the Museum and took me with him, and we at the same time examined other buildings for comparison, and I had the benefit of hearing the whole discussion upon the subject.

Before concluding this paragraph I must not omit to mention the Oomaru (N.Z.) stone of which we constructed the High Altar and other altars at St. Mary's, and which was worked with carpenters' tools.

It was quite new to me at the time and I was rather fascinated with it, and made models of ramps and handrails and of groining and vaulting, one of which later I used at the Lands Office.

5. *Concrete.*—I suppose the present day may be considered the beginning of the Concrete Age as far as building is concerned, for in the 'seventies concrete for constuctional purposes was very little used.

I think that Mr. Young did use some concrete in connection with Farmer's building in Pitt Street but that was before my time.

At the Lands' Office we used *coke* concrete for the ceiling vaults over the arcades, and I well remember having some trouble in setting out the centering for the irregular groined vaults of the North End bays of the Eastern and Western Arcades, in connection with which I cut out models in the Oomaru stone, to which I have previously referred.

Mr. Young also induced Mr. Barnett to allow him to construct the drum of the Observatory Dome at the Lands Office of concrete, as owing to the openings and the lack of bond it would have been difficult to make a well tied job in stone or brickwork.

Apart from the above, however, we did not meet with any concrete construction excepting in our designs, where Mr. Young used it freely.

He was sometimes called the Father of Bowls owing to the part he played in establishing that game here, but I think he might more appropriately have been called the Father of Concrete in our State, for I think he was the first here to use it, for constructive purposes, and at the time I speak of we were, as I have said, using it freely, and even *reinforcing* it without any of the present scientific knowledge of reinforcing.

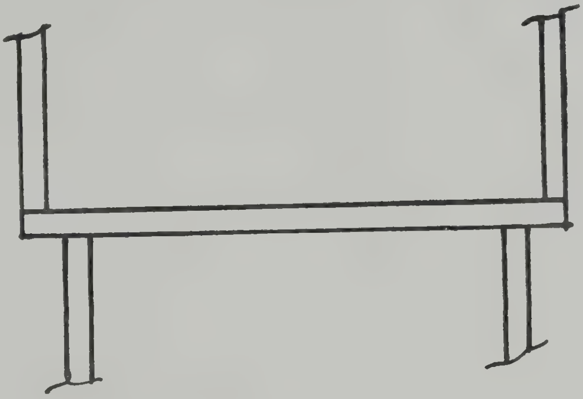
I remember well in connection with a building in Park Street with concrete foundations in which we decided to have a cellar under one portion that we first dug our trenches some 10 feet deep and filled them with concrete, and later when it had set, excavated the internal area which had served as our casing. While the work was in progress, Mr. Mansfield, who happened to be passing, looked in and asked me why we were excavating such deep trenches, and when I explained that we were going to take the earth out later for a cellar, he exclaimed, "You must have great faith in the stuff; I wouldn't like to build on it after the earth is removed," to which I replied: "It wouldn't be much good, Sir, if we had to rely on the earth to hold it up."

I mention this as showing how little even our leading Architects then recognised concrete for constructive purposes.

In the same building we decided to have a fireproof concrete floor at the First Floor level, and this we reinforced with old railway Barlow rails, which we should now consider ridiculously strong for the purpose. This concrete floor we carried right over the outside, and projected it to form the coring for the cornice.

At North Annandale also, where we erected the earliest buildings, we used concrete always for footings, and sometimes also in superstructure, and in upper floors where we always reinforced it either with railway rails or iron bars.

On one occasion in erecting a Billiard Room for himself over a sub-structure that had only 15ft. span, whereas we required 18ft. width for the Billiard room, we put a concrete floor reinforced with rails and carried it out 18in. on each side over the lower walls, and then built our upper walls on the overhang.



I used sometimes to surprise Mr. Sapsford with some of the things we were then doing with concrete, for I may tell you that as there were in those days no architectural draughting classes, excepting a very elementary one at the School of Arts I, for the first two years that I was with Mr. Young, took private night lessons in draughting and design with Mr. Sapsford, who was at that time Mr. Mansfield's chief draughtsman.

In addition thereto I used at night for my private instruction, feverishly to trace not only the Lands' Office and St. Mary's details, but many other drawings in which anything specially struck me, for there was, of course, no helio printing then.

Most of our concrete to which I have referred was constructed with broken sandstone or broken brick, especially old *clinker* brick as a matrix, though for special purposes we sometimes used bluestone shivers even then.

I sometimes smile as I look back and recall our primitive reinforcing of concrete in those days as compared with the scientific reinforcing of to-day.

6.—Brickwork.—The bricks we used in the 'seventies were principally hand made sandstocks for ordinary work, and double pressed plastic bricks (and very good bricks they were) for facework.
We used to get some exceptionally good moulded bricks from Bowtell at Newcastle.

The present day pressed bricks did not come into use until the 'eighties, but a few wire cut plastic commons had begun to be made.

Cavity walls and split dampcourses and wall ties, etc., were quite unknown.

The Bricklayers whose standard wage at that time was 11/- a day, were many of them excellent workmen, and took pride in not how few, but how many bricks they could lay in a day.

7. *Iron Work and Timber Work.*—There were no rolled steel joists nor steel stanchions then. Any metal columns were of cast iron, and our girders were riveted plate girders, either single web, or box girders, according to requirements.

In an earlier paragraph I have referred to our ironwork tenders at the Lands Office, where we had a considerable amount of iron work, not only in plate and box girders, but also in roof principals and main dome construction and in the revolving observatory dome.

Shocking cast iron designs for balcony railings and friezes and fringes were in regular use for residential work, many examples of which still remain, at which some of you perhaps occasionally smile or shudder.

As regards Timber work, Hardwood and Oregon for constructive purposes, delightful Kauri for flooring and other uses, Cedar and sometimes Tasmanian Blackwood and American Walnut for Joiners' work were our principal timbers. Queensland Maple of course is of quite recent use.

We had a sawmill in Woolloomooloo for general purposes, but we did not manufacture any Joiners' work.

Speaking of this sawmill I am reminded of something I have quoted before to the Institute, but which I may repeat here.

We were shoring up for Mr. Wardell a house in the Rocks area, which had been foolishly built (not under Mr. Wardell, needless to say) partly on rock and partly on filling and which consequently had split.

There were, as I have previously said, no rolled steel joists then, and we wanted a well-seasoned old Hardwood beam for our purpose. Coming into town from Newtown on top of an omnibus (no trams then) one morning I saw a shop being taken down in the Parramatta Road (now George Street West) with what appeared to me just such a bressummer as we wanted.

Quickly alighting, I went across and had a look at the beam, which was 14in. x 14in., housed out about 2in. all along the inner side for the joists.

Finding it was for sale I bought it, and as we wanted a 14in. x 12in. beam I sent it down to the mill and had 2in. cut off all along one side to eliminate the housings.

Now this beam, as far as I could learn, had been in the building for at least 35 years, and yet when the 2in. strip was cut off, and a new face exposed, the whole beam curved, and I consequently cut off about ¾in. all along from the other side when it straightened again.

I mention this in confirmation of a theory that I hold in reference to all our hardwoods, viz., that their great strength is partly due to the fact that they form an outer skin which retains the vitality in the wood.

Most of you know in regard to hardwood flooring that has curled along the edges that if you plane it down, it will only laugh at you and curl again as a new face is exposed.

8. *Plaster Ceilings.*—At the period of which I am writing neither zinc and stamped metal nor Fibrous Plaster ceilings had emerged, though within a few years afterwards Mr. Boyne, a very competent plasterer, began experimenting in pressing coarse canvas into plaster sheets.

Lath and plaster of course, was in general use for ceilings, but was frequently giving us trouble, and at Annandale we tried some experiments in reinforcing it with wire netting spreading the laths to a rather wider key than was usual, and then securing the wire-netting and rendering through the netting and lathing, which was a sort of half-way house to expanded metal lathing.

9. *Special Construction and Designing.*—Under this, my ninth and last heading, I wish to speak especially of

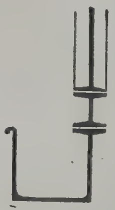
(a) The Garden Palace and

(b) John Young's City Railway scheme, both of which deserve special mention in any resume of his operations in the 'seventies.

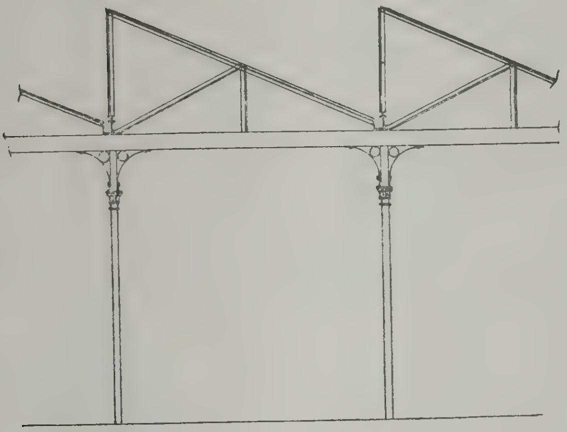
Before speaking of these, however, I may mention that though of slightly later date we also owe to him the fact that the Town Hall was planned to its present dimensions as the original plan was narrower, being designed in width to the same dimensions as the length of the Vestibule, and I myself, saw Mr. Young (Mr. Sapsford being then City Architect) take up a pencil and curve out the side walls at the Eastern end, saying, "Put your galleries in there." Later he sent me down to see the excellent draughting of the drawings prepared by Mr. Hennessey, then a new arrival in the Colony, that being my first introduction to Mr. Hennessey.

(a) *The Garden Palace.*—In 1878, very largely at the instigation of Sir Hercules Robinson, then Governor of New South Wales, it was decided to hold an International Exhibition, and among others who were invited to advise, Mr. Young took a prominent part, not only in the earlier suggesting as to dimensions and design, but also later in the erection of the building.

He had been with Sir Joseph Paxton in the erection of the Crystal Palace in 1851, and his first idea for our building was a framework of iron on a unit of 25ft. (the Crystal Palace unit was, I think, 22ft.), and I prepared for the committee under his instruction ½in. scale details of a unit with hollow iron posts serving also for downpipes and with trough girders forming room gutters, and with T iron framed saw tooth roof all at 25ft. spans and heights, and lighted as in a modern wool store.



Unfortunately both lack of materials and lack of time prevented the adoption of its construction in iron, which probably would have saved its subsequent destruction by fire, but the unit and the design were adopted and carried out in wood, the posts, excepting those in Basement and those of Nave and Galleries, being square hollow built wooden posts, with downpipes running through them, and the girders framed as wooden troughs, and the roof principals also framed in wood.



The building, as many of you know, was erected where the Governor Phillip statue now stands, in what was then known as the Inner Domain, and as will be seen from the old photos. from which I have had slides made, presented with its well-proportioned dome (100ft. in diameter) a very imposing appearance from the Harbour.

I have prepared from memory, assisted by my photographs, a skeleton plan and section showing the general setting out of the building, which, although memorised 45 years after its erection, may, I think, be taken as accurate.

The building, as you will see from the plan, consisted of Nave (700ft. x 50ft.) and Transept (400ft. x 50ft.) each flanked by lines of galleries 25ft. wide, and with a Dome of 100ft. diameter over the intersection of Nave and Transepts. (Notice the 25ft. unit.) On the outer sides of the Nave Galleries ran three lines of 25ft. bays of one storey saw tooth roofed flanks, making 75ft. flanks to the Nave while the flanks to the Transept were only two bays wide, i.e., 50ft. on each side.

Owing to the fall in the ground a Basement storey was possible along the whole length of the eastern flank of the building and under the Eastern Transept.

At each end of the Nave and Transepts were 50ft. x 50ft. square brick entrance Towers with a 25ft. x 25ft. brick staircase annexe on each side of each, these brick Towers giving the necessary stiffness and acting as buttresses to the ends of the Nave and Transepts, the foundations and Basement walls being the only other brick portions of the building.

Including the Towers the total length of the building was 800ft., and the total width through the Transept line 500ft. while the main width longitudinally was 250ft. and the width across the Transept 200ft.

If my memory is correct as to dimensions, and I think it is, the floor area not including Entrance and Staircase Towers would work out as follows, viz.:—

Ground Floor	205,000 super feet.
Basement	67,500 super feet.
Galleries	45,000 super feet.
Upper Floors of Towers	10,000 super feet.

making a total available floor area of 327,500 super feet, or a little over 7¼ acres.

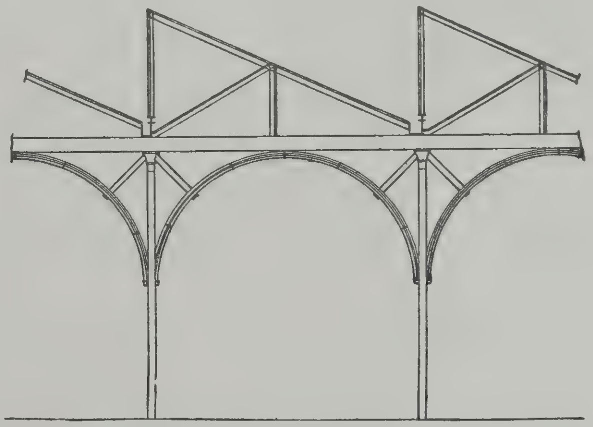
The area of ground actually covered by the building, including Towers, was 5½ acres.

In addition to the Main Building there were various other entirely separate buildings in various positions in the Outer Domain such as the Machinery Shed on the side of the cricket pitch, an Art Gallery close to the Garden gates, a large Refreshment Pavilion erected by Compagnoni, then well known caterers, a small pavilion for the Japanese, who were just then coming into prominence, and I think one or two other minor pavilions.

The main building, which cost £250,000, was erected in eight months, working day and night an average of 1500 men being employed, 500 in each of three eight hour shifts.

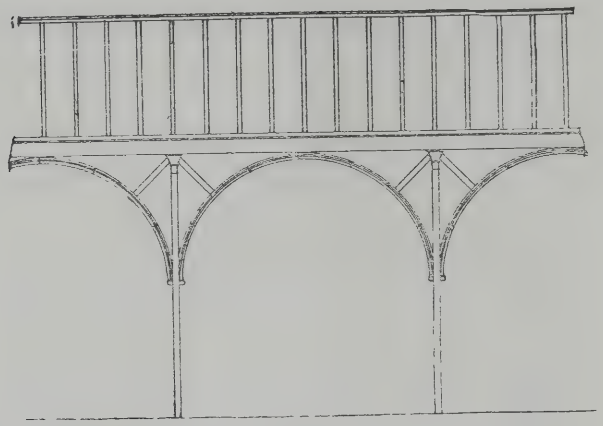
It was, I may say, the first time that electric light was used in Australia for any practical purposes, these being of course, powerful arc lights (then the only form of electric light) which owing to their lack of diffusion, we found cast very black shadows, not a few accidents resulting therefrom.

Regarding the order of work, as soon as the brick foundation walls and sleeper piers of the western half of the building were ready that half was joisted and floored with 2in. decking, and the one storey flanks built on top of the decking. Meanwhile the excavation for the Basement section and the necessary brickwork of same and of the towers was proceeding rapidly, and the whole area soon floored over.

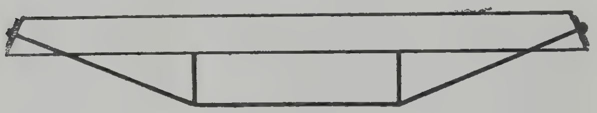


The drawings were all prepared by Mr. Blackmann, who did his work excellently, more especially in view of the fact that he was often handicapped as to the sizes of timber available, and sometimes had to adapt his work thereto, for we were purchasing Oregon before it arrived, and Mr. Blackmann used to prepare his drawings first in the rough and then he and I would go through the shipping manifests and work out therefrom what sizes of timbers that were arriving could be adapted to his requirements, this often involving some change in his details.

Turning to details, the one-storey flanks, as I have already said, were erected on a unit of 25ft. square, and 25ft. high with framed hollow posts down the centre of which ran the downpipes, these posts carrying framed trough beams inside which the rough gutters were formed, the roof being a simple trussed saw tooth roof with lights and ventilation as in a modern wool store.



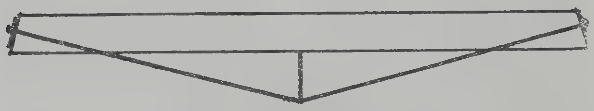
The wooden arches from post to post were laminated in three thicknesses (each ply 2in. thick) making 6in. in all, and with broken butt joints, thus being formed out of short lengths of timber and stiffened by struts as shown in sketch.



The beams across the Basement were hardwood beams trussed as shown with, I think, 1½in. truss rods and 2in. cast iron and plates papped and ribbed to 2½in., and as Mr. Barnett wanted a trial beam made and tested, we made one and tested it in the yard at the back of the Treasury (where the tram depot now is) loading it up as evenly as possible with pig iron till I was afraid that the iron might topple over on the men loading it. Presently we heard a sort of rifle shot crack and found that one of the cast iron end plates had cracked. I forget what the weight was, but I think if I remember rightly it was just over 90 tons. At any rate we increased the thickness of the end plates.

The Nave and Gallery posts were of Hardwood carried right up, and supplemented under the Galleries by flanking posts at sides and back of each.

Heavy Queen post trussed beams longitudinally formed the balustrade on both sides of the Galleries and acted as floor girders carrying single chair trussed cross beams at about 8ft. apart (i.e., three to a span of 25ft.) which gave short spans for the joists).



The galleries had, of course, high lights all along one side above the roofs of the one storey flanks, and were open to the Nave and Transepts on the inner side, and these galleries were roofed with pitched roofs, carried on the inner side on light open lattice iron girders which also carried the clear storey lights of Nave and Transepts.

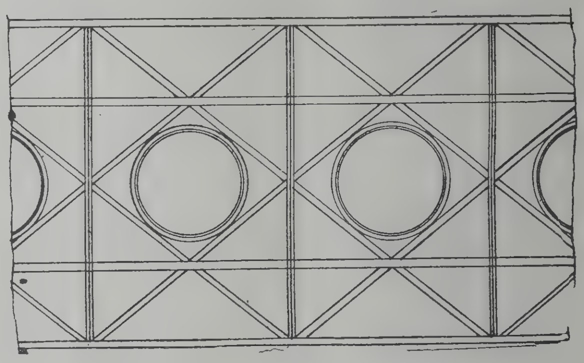
The construction of the roof of Nave and Transepts will be gathered from the photo. of the interior from which it will be seen that framed and arched principals, 25ft. apart, spanned the 50ft. Nave and Transepts, the arches being formed with short lengths of timber socketed into iron bands, while the intermediate rafters at about 3ft. apart were framed at head and foot, but without arches.

To lift these roof principals and rafters a stilted traveller running on tram lines the whole length of the Nave and Transepts, carried on overhead crane which picked them off the floor where they were framed up, and lifted them right into place, where they were strap bolted into position.

I remember passing some hours one night on top of this moving traveller, watching with keen delight the ease with which these wide span rafters were lifted and fitted.

And now lastly under this heading, a few words as to the construction of the dome which was of course the piece de resistance of the whole building, especially as it was carried upon and also entirely constructed of timber, though reinforced of course with iron bands and straps.

Four strongly framed and braced angle towers about 60ft. high carried the drum, which drum, if I remember right, was about 15ft. high and 32 sided, and constructed of stout framed and braced hardwood, banded on the outside with four heavy iron bands like huge cask hoops, and with a circular light in the centre of each section.



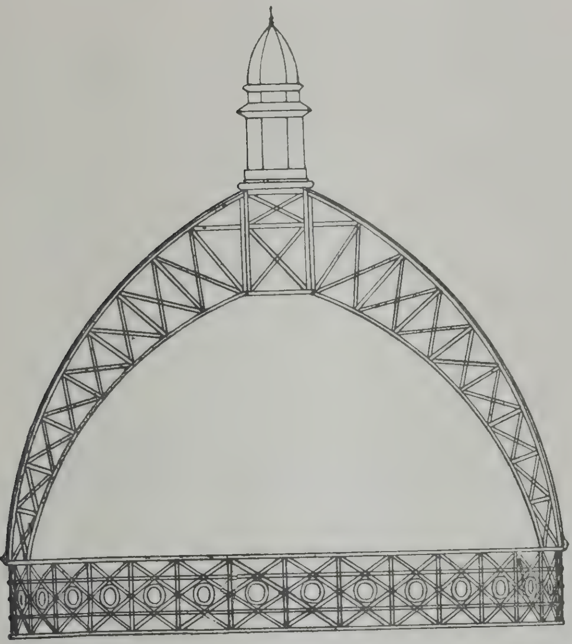
From the floor temporary scaffold towers were erected carrying a strong platform on which the lantern was erected, the lower portion of the lantern being also very strongly framed to take the ribs.

From this elevated platform a crane lifted the thirty-two ribs which were framed as shown in sketch and iron strapped.

The whole thing was very accurately constructed, and went together without a hitch.

In proof of the accuracy with which these ribs were constructed and fitted I may mention that before the last temporary supports of the lantern were removed I had four long wires with sash weights hung to within a foot of the floor to gauge the expected settlement, which we thought might be at least 6 or 7 inches, but as a matter of fact it was barely 2½ inches.

I kept shouting up through the speaking trumpet to know if the last shores were really removed before I could believe that the settlement was so little, and when you remember how these curved ribs were built up out of short lengths of wood you will appreciate my pleased surprise.



I was young and active in those days, and one fine morning before the roof iron was on the dome, in company with one of the Colonial Architect's staff, I climbed up over the outside of the dome on the purlieus, which were 2ft. apart, and then up on the foot pieces to the top of the crane, above the lantern, from which height, I think about 210 feet above the floor level, we had a wonderful view, though I remember the coming down was worse than the going up.

So much for the Garden Palace, which I have tried to reconstruct from memory for you, I hope without wearying you.

(b) *John Young's City Railway Scheme.*—Any reference to John Young in the 'seventies would be incomplete without special mention of his City Railway Scheme, and under this, my last heading, I want for just a few minutes to show you the Inner and Outer City Railway Scheme which he propounded and which we published in the "Illustrated Sydney News" in 1877.

Before preparing the lay-out Mr. Young and I drove on several afternoons, in his buggy, as close as we could approach to the line of direction, and took rough levels etc., and then I obtained from Gibbs, Shallard and Co. a bird's eye view of Sydney, which they had previously published, and I plotted thereon the proposed route, which included an inner circle from Redfern (the existing line from Eveleigh being slightly lowered) via Darling Harbour, with a branch to a central sunk station near King and Clarence Streets, the main line continuing round Darling Harbour and then cutting through to the Circular Quay, thence tunnelling under Government House grounds to Woolloomooloo Bay, and this inner circle line returning up the valley at the back of the Museum and Grammar School and under Oxford Street and across Belmore Park back to Redfern, thus completing our Inner Circle. The outer Circle continued from Wooloomooloo Bay under Victoria Street (our longest tunnel) to Rushcutters' Bay and thence ascended up the long natural valley, where the Grammar School playing grounds now are, to Woollahra, whence we skirted Waverley and Randwick, and continued on to Botany, which Mr. Young prophesied would become the Factory Area for Sydney, and thence back through Waterloo to Redfern, thus closing our Outer Circle. Combined with the scheme were goods lines along Darling Harbour for wharfage delivery and the remodelling of Darling Harbour|

The old gas works presented one of our difficulties, but Mr. Young truly prophesied that they would in time be moved elsewhere.

I was months on this work, as in addition to making drawings, we worked out approximate estimates for resumptions and construction and published a series of long letters in the press, which Mr. Young roughly drafted and passed on to me to edit, all of which was most interesting work.

As you look at this scheme, remember that it dates back 47 years, before even the first steam tram ran in Sydney, and when the cost of resumptions and of construction would have been trifling as compared with to-day.

Remember also that at that time no one could have forecasted the growth of the City that we have seen within less than half a century, so that in judging the scheme, you must bear in mind that the author of it, if he were alive to-day would himself no doubt see suggestive modifications, but allowing for all this I think you will agree with me that the author was a man ahead of his time, and was not only a Master Builder, but a man of master mind.

And now, in conclusion, may I express the hope that I have interested you, as I certainly have interested myself in turning over these pages of memory, and that while being reminiscent as old men, they say, love to be, I have not been unduly garrulous.

Memory, you know, is a strange storehouse in that it often retains the impress of the acts performed, the lessons learned, the books read in early youth with far greater vividness than it retains those of later life.

I do not propose to enter into the controversy as to whether *"The pleasures of Memory"* or the *"Pleasures of Hope"* are the greater, but I sometimes envy you younger men before whom lie paths of progress still untrodden, and building methods still untried, to which you may look forward with Hope, as I also do when I say with Browning:

> *"Grow old along with me,*
> *The best is yet to be."*

PROFESSOR WILKINSON moved a hearty vote of thanks to Mr. Kent.

COL. WELLS seconded the vote, which was supported by MESSRS. G. P. JONES, KETHEL, and CLAMP.

MR. KENT briefly responded.

INSTITUTE OF ARCHITECTS MONTHLY GENERAL MEETING

NOVEMBER 3rd, 1924

LECTURE BY W. G. LAYTON

"City Beautification"

THE PRESIDENT (SIR CHARLES ROSENTHAL) occupied the Chair.

THE MINUTES of the Previous Meeting were confirmed.

APOLOGIES were received from Messrs. Howard Joseland, R. V. Minnett, and J. C. R. Mills.

The President reported the death of two Members in the last month—Messrs. J. F. Hennessy and J. Dunstan. It was decided that letters of sympathy be forwarded the relatives.

THE CHAIRMAN: An important matter on our business paper this evening is the Report of the Sub-Committee re Revision of Articles of Association, consequent on the proposed fusion of the Institute with the Architects' Association. We want you to adopt this Report this evening, and then under our Constitution we have to have a confirmatory meeting. I will narrate the circumstances leading up to this stage, and then ask Mr. Peddle, as Chairman of the Committee which has dealt with the matter, to give us the salient points of alteration.

For some time we have had in Sydney not only an Institute of Architects, but an Architectural Association. I need not go back to the initial differences that were considered to make it necessary to build up this new organisation. It was built up, and it has done useful work. The time has arrived, since the Architectural Board has come into existence, that we think there should be only one Architectural body. All Architects, if qualified to practice, are registered with the Board, and come on to a common ground. A conference has been held between the representatives of the Association and our Institute, and the feeling on the part of the Executive officers concerned was unanimous that we should join forces as from the beginning of January next. The agreement to fuse our strength involves sacrifices on both sides. The Architects' Association has certain more or less substantial funds, furniture, books, etc., and we, on our side, also have assets of a similar kind. One of the stumbling blocks hitherto to the Association joining was that we had varying degrees of membership—Associates, Fellows, etc.—as well as varying subscriptions for Senior and Junior members, the fee for Senior running rather high. It was felt that it was too much. In order to have a common ground, it was necessary to amend our Constitution affecting the status of our members and their subscriptions. I do think, gentlemen, that the sacrifice we are asking you to make in the giving up of our Fellowship, and the reduction of our fees (which latter will in a way affect us adversely) will be nothing compared with the value of the solidity that will come to us by both organisations being welded together. The proposal is that when the amalgamation is given effect to, the combined bodies will naturally meet and make any amendments they consider necessary, but we must come to a common basis first. We now ask you to adopt the proposed alterations, and at our next meeting, in December, we will ask for confirmation, so that we can then have our elections and get to work from the beginning of the year as a newly-constituted body.

We will ask you to accept the assurance of the Council that they have gone through the amendments carefully. I understand it is a legal obligation to have them read out. These alterations are only such as are necessary to bring about amalgamation. We still require the approval of the architects as a body. When the amalgamation is brought about, the united body can then consider the Constitution, and amend it in any way they like. We are merely opening the door. This does not mean the automatic inclusion in our Institute of all registered architects. The fact that a man is registered to-day as an architect is an acknowledgment that he is qualified to practise, and as such he becomes eligible to join the Institute, but he will not necessarily become a member. He will have to be ballotted for in the usual way. There may be men who are qualified architects, but who, for other reasons, may not be acceptable as members. We want you to approve of this to-night, and then at our next meeting, in December, we will ask you to confirm this action.

MR. PEDDLE moved that the Constitution be amended as set out in the Report.

MR. SCOTT seconded. At first he had been a bit doubtful, but, having gone into the pros and cons, he thought the amalgamation was desirable. It was time the profession generally carried more weight in regard to many matters. Financial matters had troubled him somewhat, as the Institute had never been very financial, but when it was considered that in the union of the two bodies a lot of double expense in regard to staff and management would be eliminated, he thought they were on perfectly safe grounds. Nothing in the future would stop them from strenghtening their financial position. He was thoroughly convinced that the amalgamation was the right thing to do.

THE CHAIRMAN, in introducing Mr. W. G. Layton, welcomed him to their meeting, and stated that before Mr. Layton went away on his world tour the control of the City parks came under his jurisdiction.

THE LECTURE

MR. CHAIRMAN AND GENTLEMEN: In the first place, I would like to say how deeply I appreciate your invitation to be present here this evening, and the privilege of being allowed to say a few words with regard to my trip abroad. When I left I felt the responsibility very much, because I considered that I had been paid a great honour. I confess that to-night I have feelings almost akin to nervousness. I am not, as a rule, a sufferer in that direction, but I realise I am speaking to a number of men who probably know a great deal more than I do about the subjects to which I propose to refer. Still, I think you will not be averse to hearing of some of those things which struck me, as a layman, while I was abroad.

City Beautification is to me quite one of the most important civic functions, and I was, indeed, very much struck with the importance that was placed on the beautification of cities abroad; what is being done at the present time, and what has been done for centuries past. We know the beauties of the very old cities, and we know that civic art really radiated from those ancient cities. There seemed to come a time when the spirit of commercialism and utility, brought about no doubt by the huge congregations of people forming cities and growing rapidly, pushed aside for the time being the impressed upon me when I went over to America, where requirements and the dictates of culture and refinement, but it was only for a time. That fact was particularly I found cities of 5000 or 6000 people which had grown up within half a century, cities that had grown like Sydney, and had not been planned, but had simply outgrown their strength as it were. Now, in those cities, you find a determination to beautify and to add dignity, and, so far as I can see, one of the outward indications of that growth towards culture and refinement is reflected in the parks and gardens which are being made. It is realised, too, that the City Beautiful has a very deep impression upon the citizenship in these great cities, and I am sure that we here in Australia are realising that fact, too; and I would like to say how nobly our City Council has responded to the call to do what they thought was right with regard to beautification so far as the City parks are concerned. Whether they worked on proper lines or not I am hardly in a position to say, but I would remind you that it is only a comparatively few years ago when Hyde Park and other parks of our City were controlled by a Commission, and at the time that we took over four of those parks—Hyde, Cook, Phillip and Wynyard—I think the annual grant made to those Commissioners was something like £1000 a year. The reason why the City Council responded nobly to the call is this: The Lord Mayor at the time—Sir Thomas Hughes—asked me what I thought would be a fair thing to ask the Council to vote annually for the upkeep and improvement of those parks, and I said, "Put it down at £5000 a year to start with." To-day the Council, without any demur, vote something like £30,000 a year. I do hope before long that the money will be directed into better channels.

The buildings of a city, to a large extent, form its character. So upon you, gentlemen, must rest a very great responsibility. I was much struck while abroad with this fact: that almost all the great cities of the world have some attraction. They seem to have set themselves a task to make some special feature in their city, and the advantage of that is very noticeable, because the citizens themselves seem to take such pride and interest in those beautiful works. Although you find those beautiful things in so many cities abroad, you must not think that those cities are all that they appear to be on the surface, because they are not. They have their back lanes and back yards.

I could never make up my mind whether the Ring Strauss was not even more dignified than the Champs Elysees. I am inclined to think it was the work of architects which made it so fine, because of the way in which the buildings had been constructed and regulated. Apparently, no one was allowed to build just at his own sweet will. All the buildings on one side, if not of exactly the same kind of architecture in each block, at least harmonise. There would be one block of perhaps seven buildings; the two at each end would be five or six storeys high, the next two a couple of storeys high, and the one in the centre just a little higher. The horizontal lines are always the same. I am rather inclined to think that is one of the most wonderful and dignified pieces of city beautification that could be found. It was constructed only about half a century ago, and was made possible by the pulling down of the old wall and resuming large areas of land.

Going from the Old World, where one sees so much of the refinement of architecture, to the New World in America, one is impressed with the fact that commercialism may be very well in its way, but the people lose a tremendous lot by the fact that in some of those highly commercialised communities, they have crushed out the very best part of civic life. Still, that is being remedied to a large extent now, and it was there more than in any other part of the world that I was impressed by the efforts being made now to beautify those cities, especially in the laying out of their parks.

In some cities you can also trace the history of the Nation by its works of art and statuary; in others, it is by the lay-out of their parks that these cities vie one with another, and both in the Old and the New World it seems to me there are lessons for us to learn with regard to our parks. It is a subject on which I have very definite views. A park is not a garden. There is an atmosphere of restfulness and dignity about a park which should be characteristic, and should convey all those feelings to the people who use it. There can be, and should be, nothing of the cottage garden effect in a public park. As an instance, I would mention Hyde Park in London. It is just a piece of nature grabbed and put down in London, and anything more beautiful and restful would be hard to find; in the centre of those teeming millions—grass, trees, a lake.

I trust you, gentlemen, will forgive me if I say that very often architects do not quite realise the intimate relationship between architectural and landscape gardening. The importance and the value of the setting that is necessary to the beautiful buildings you design would greatly enhance the view. I say that, because I so often see in the suburbs beautiful houses absolutely spoilt by the setting. The owner very likely would not have a tree for the world, because it would grow up and hide some of the expensive architectural work. You do not seem to point out this part of the scheme, and, if you do, you do not seem to insist upon it being given effect to. You will see a fine, noble residence surrounded by a cottage garden. Vegetables would be much more useful, and just as effective. In Sydney, we are asking you to help us to do a noble and necessary work. There are few cities which have right in the centre thirty-odd acres of land to beautify. The opportunity has occurred now, because of the City Council's works, and my council is asking you to help them. I do hope the outcome of that is going to be that we will have a park in Sydney of which all Australia will be proud. There is no reason why we should not. If you take it in hand I know the desired result will be achieved, and there will be some co-ordination in the scheme you will suggest.. It does not matter if it is not carried out in its entirety for years, so long as all the time we are working towards a right end. At the present time, it seems to me it is almost a pity the Railway people did not take the whole thing and let us start again.

In many of our civic functions we are quite up-to-date, and although we may not be able to point to thoroughfares that are perhaps as well kept or fashioned as some of the great show streets of the Old World, our streets, as a whole, will compare very favourably with those of most cities. I saw dirty streets in New York, and in Chicago I think I saw filthier streets than anywhere else. We score in regard to our back streets. Perhaps our main streets are not quite as showy, but when we come to Surry Hills and Woolloomooloo we stand out conspicuously as being in advance of the older cities. I am not saying that we should be content with what we have. Still, it is unfair for people to go to other parts of the world and then come back and talk about the streets of Paris and other cities, when perhaps they have only seen the show streets there.

If I have said anything that is at all likely to set you gentlemen thinking of the additional responsibilities that are cast upon you so far as good citizenship is concerned, then my remarks will not have been wasted. In conclusion, let me say how grateful the council will be to Sir Charles Rosenthal and Mr. Waterhouse for the assistance they are going to give me in drawing up the improvements to Hyde Park. I do hope, quite apart from the premiums the council is offering, you will make up your minds to give us something that will be a lasting pride to our city. I have seen most of the great cities of the world, and I can safely say that there are very few more beautiful than Sydney, and if you take it in hand to further beautify it, with your help, we will hold our own. I thank you very much for listening to me so attentively.

A vote of thanks was accorded to the lecturer on the motion of Mr. Scott, seconded by Mr. Waterhouse, and supported by Professor Wilkinson.

NOTICES

EXHIBITION, 1925.

EXHIBITION.—It has been decided to hold the Exhibition in June of next year, the Annual Dinner to be run concurrently with the Exhibition. It is gratifying to notice that the 1924 Exhibition showed a credit balance of £3/7/5.

Members are requested to begin the preparation of work for the Exhibition, which it is hoped will be of a very high class, on account of so many competition designs being available.

Professor Wilkinson will be glad to hear from any architects who would be willing to give third-year students of the University School of Architecture an opportunity of gaining office experience during the long vacation in January or February next.

ARCHITECTURE

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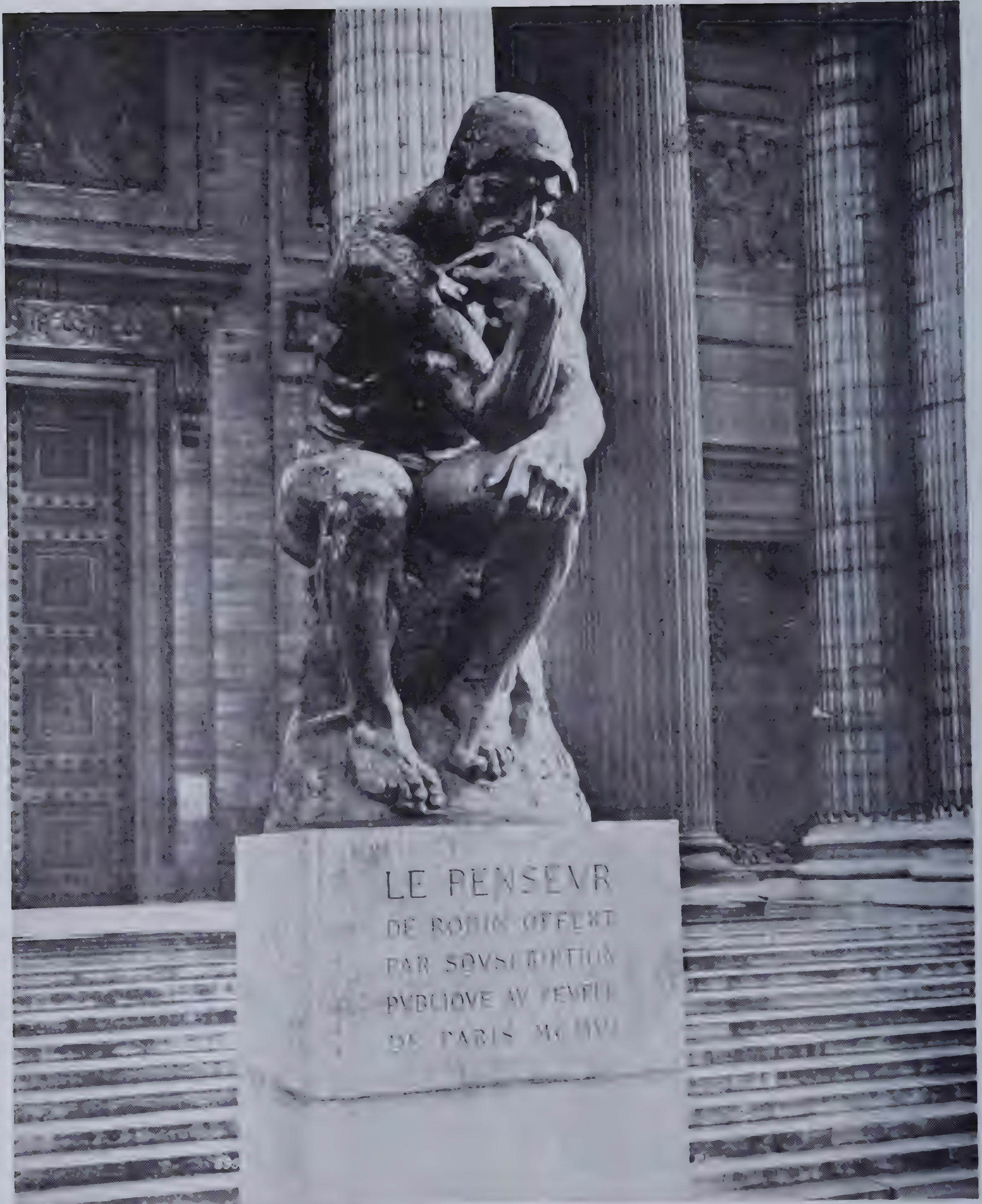


LE PENSEUR

by

AUGUSTE RODIN

PENCIL DRAWING BY HENRY RUSHBURY. Reproduced by permission of "The Studio."

LE PENSEUR

". . . . I came across him by the great gloomy pile of the Pantheon, gazing at Rodin's statue of The Thinker.

How often have I stood in front of it myself? That nude figure fascinates me as does no other in modern sculpture.

The essence of simplicity, it seems to say unutterable things. Arms of sledge-hammer force, a great back corded with muscle, legs banded as if with iron; could anything be more expressive of magnificent strength? Yet, oh, the pathos of it; the small undeveloped skull, the pose of perplexed, desperate thought!

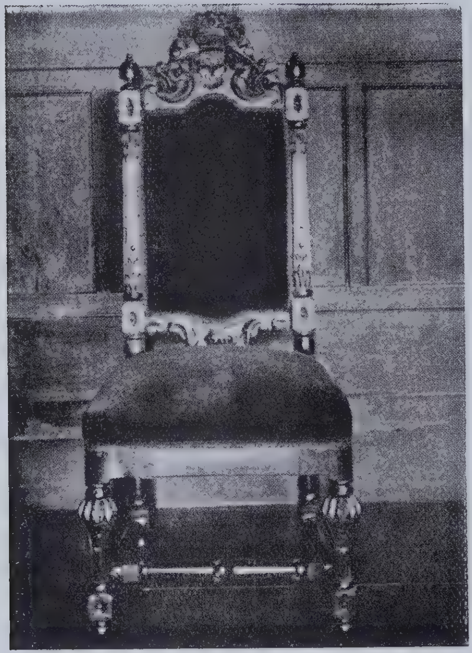
So must primitive man have crouched and agonised in that first dim dawn of intelligence. Within that brain of a child already glimmers the idea of something greater than physical force; within that brute man Mind is beginning its supreme struggle over Matter.

Here is the birth of brain domination. Here is the savage, thwarted, mocked, impotent; yet trying with every fibre of his being to enter that world of thought which he is so conscious of, and cannot yet understand. Pathetic! Yes, it typifies the ceaseless struggle of man from the beginning, the agony of effort by which he has raised himself from the mire.

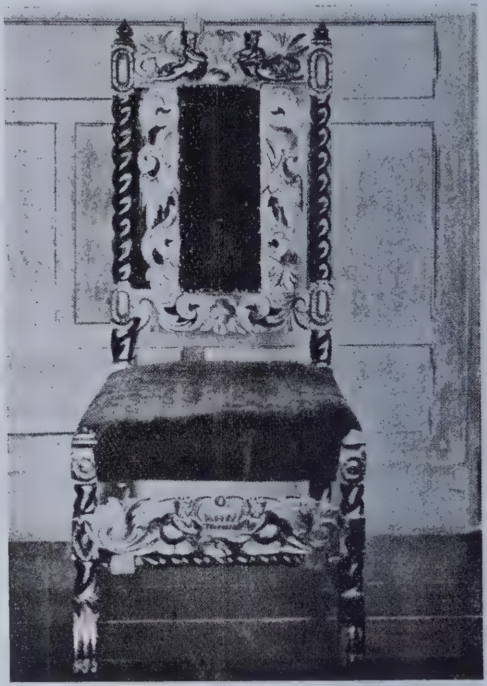
Far from a Newton, a Darwin, a Goethe, this crude elementary Thinker! Yet, with his brain of a child as he struggles for Light, who shall say he is not, in his way, as great.

Salute him! He stands for the cumulative effort of the race."

From "The Pretender," Robt. W. Service.



CARVED OAK CHAIR, EARLY EIGHTEENTH CENTURY.



CARVED OAK "RESTORATION" CHAIR.

AUSTRALIAN ART

Who—or what—is it?

THERE has been a fair amount of annoyance expressed in the daily papers over the cutting down of the annual vote or bonus paid to the Art Gallery to acquire pictures. Mr. Lionel Lindsay had a very interesting letter on the subject, and as he occupies the dual role of artist and trustee he can speak more feelingly on the subject than the majority. He points out how it is only by having this money the trustees can purchase pictures by Hugh Ramsay, Streeton, Hans Heysen, etc. It certainly would be a great pity and loss to the community if such artists' works were omitted from the collection, but what about the heap of lumber to be seen on the walls or stored in the cellar? May it not be a blessing in disguise when "halt!" is called—it gives time to get breath after the scramble to acquire, and allows time to view in peaceful calm the remaining "Art" on the walls. This pause also gives us time to consider "What do we mean by Australian Art?" Is it all-embracing or merely, one of the many branches of Art? From what we can read, evidently painted pictures are the only form of art known, and the merits of some of these might be judged by their weight or amount of paint used in their production, and seemingly the higher we attain in this form of art, less and less clothing covers the artistic form of the subject. It makes one think that on these lines our Australian blacks have attained the highest art, judging by the scarcity of their clothing. The picture form of art may be a very beautiful and instructive one, but it will never teach the majority of us as to what is good or bad in the everyday things around us. Does not the man who makes a beautiful boat, or shapes the body of a motor car into a pleasing outline produce art? Almost everything we see or handle can have an artistic form, shape, or outline. We may have good pictures on the walls, and shocking art in furniture, carpets, silver, embroidery, not to mention the house we live in. It is very much like the man who buys his cigars by the amount of ornament on the labels—he gets his aroma from the colouring.

The Melbourne Gallery was mentioned as an example of how Art was assisted, especially by the Felton bequest, but the fact was overlooked that their gallery is acquiring other things in addition to pictures.

MAHOGANY ARMCHAIR (CIRCA 1760).

All this is leading up to the point, that after all it may be a blessing that the subsidy from the Government has been reduced by a £1000 a year, and when it is restored again we may have found out there is a wider view in Art than picture painting. It seems the bonus system is being carried to extremes, the Baby and Art bonuses stand out amongst the many.

Has the time not arrived when part of the bonus at least should be spent on applied art—examples of the best work in furniture, silver, glass, porcelain, and metal work, examples of the everyday things around us? While a few own a picture by Streeton everyone owns furniture and the other articles necessary in furnishing, and let it be whispered—they may contain as much art as a picture. We have a few firms in Sydney who are trying to educate us in applied art. They produce good examples of furniture, etc., but when one enquires as to the selling of these articles, it appears the "Mission" type and other jazz forms are more sought after and have the greater sales.

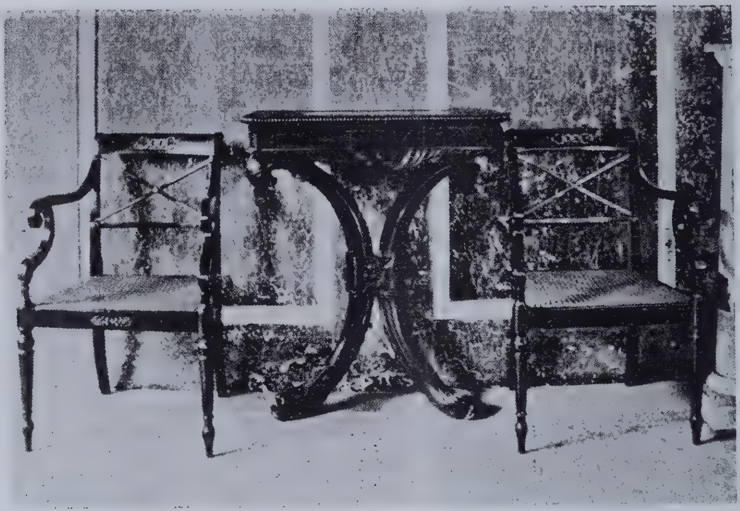
If a collection of the best examples of applied art was made and housed in our Art Gallery, it would have the dual advantage of showing that art embraces many subjects, and also show what form or shape is best for that particular article. We are now saying "Buy Australian-made goods," and do not bother as to whether these goods are artistic or vulgar.

Should not the manufacturer as well as the public be shown the proper lines to follow in the everyday things? And if we can judge and appreciate the beautiful form, outline, and workmanship in these ordinary things which everyone must have and which are always about us, we may be sure that all forms of art including pictures, will also be appreciated and admired, not because Mr. Longhair has said so, but from our own knowledge acquired by the study of what is best. Let us, therefore, try and induce the Government to set apart a portion of the annual vote for Art for the purchase of examples of Art other than pictures, when a broader outlook on these matters may be obtained, and its influence may spread over a wider field and amongst a larger part of the community than can ever be hoped for in pictures. We have some of the best artists and their pictures in Australia, and also we have others. The others can be done without, and examples of applied art bought with the money.

We must remember there are other forms of Art in addition to that well-known example of "a single fly in an empty room," and let us help not only the few to appreciate Art, but the whole community, the greatest good to the greatest number.

John Barr.

MAHOGANY ARMCHAIR.



WALNUT TABLE BY BROTHERS ADAM, "ENGLISH EMPIRE" ARMCHAIRS.

THE DILEMMA

I HAVE great news for you, my dear. Nibbleton has agreed to let me have that little block of land at Vaucluse, the piece with the beautiful gnarled old gum trees, pittosporums, and callistemons on it. You remember the wonderful boulder formation that suggests a natural garden all ready to hand. Now we can get busy and see what sort of a house we can contrive."

"I'm delighted, hubby, and hope you will accept Nibbleton's offer to introduce you to Quibbleson, the builder, who has 'put up' many of those Californian bungalows in the district. He's awfully clever; all his designs vary and he specialises in window boxes verandah piers, and tradesmen's cupboards."

"I'm not so sure, my dear. Haswon's house on a somewhat similar block to ours doesn't quite please me. His laundry and back verandah face the north-east, and somehow the living-room on the west side appears awry, and I hate the principal rooms facing a dusty highway, the council cannot afford to maintain, partly, no doubt, because they have spent too much money on twelve feet asphalt paths (sticky stuff, too) where one four feet wide and a grass plot with trees would suffice.

"Besides I'd like to sit with you on the verandah and drink in peace and quietude from the harbour waters sparkling in the sunlight, or hand in hand as the moonlight scintillates across the water———No, I'd like the little home to be really thought out, and Didwell tells me he is mighty pleased with a little crib young Drawkins, an architect I think he is, built for him."

"Oh yes, hubby, I've seen Didwell's house and Mrs. D. says she is quite satisfied with it.

"At first she was quite scared it would be all wrong, because Drawkins would insist upon all the living-rooms facing the harbour and garden, and putting what he called a small forecourt facing the highway, with the result that somehow the house appears to be without a backyard.

"Mrs D. didn't at first quite know how she would manage without one, but the garden plot answers all purposes. Let's meet Drawkins."

"I'm half inclined to agree with you, my dear, but understand, architect's fees amount to 6 per cent on the cost of the house, which Quibbleson doesn't charge, and as you know every penny must be considered; but as Didwell says he's sure he got more than value in the house for the fees charged—we'll see Drawkins.——"

. . . .

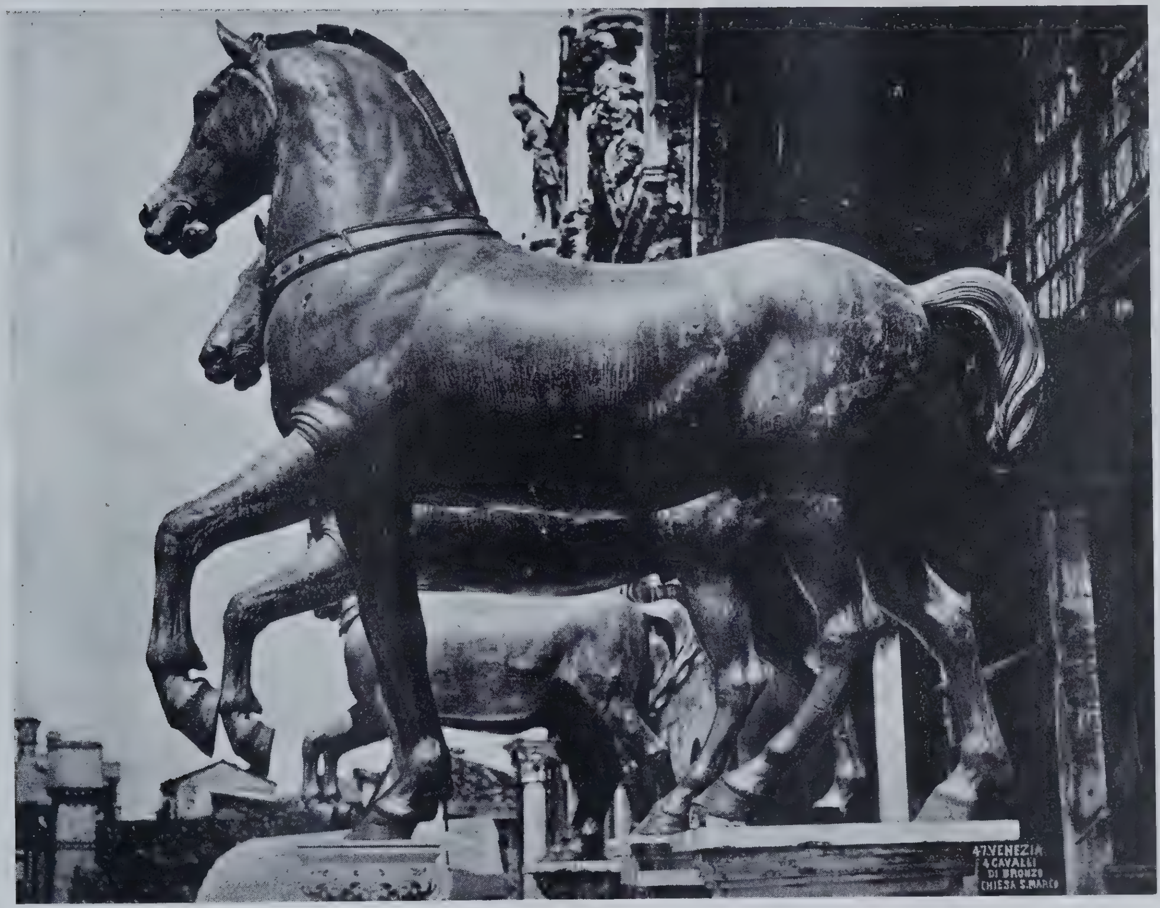
"Great news, my dear! Drawkins says we can build the crib for the amount we have in hand, including his fees, and here are the sketches he submits for our consideration—what he calls just preliminary sketches—to enable the right solution, as he calls it, to be discovered.

"I didn't know such things would be necessary, and I am under the impression that Nibbleton said Quibbleson had plans all ready for selection, but Drawkins says it's 'not done,' so we'll leave it to him.

"Now I come to think of it, Knewsome's house that Quibbleson built is strangely like Knowsomes, turned over. I admit one has a triangular bay window and round verandah posts and the other has a round bay and triangular posts—also that Knewsome's house has a curved path to the front door and Knowsome's has a diamond-shaped bed round which the path winds. I detailed these particulars to Drawkins, thinking they might suggest some ideas, but he says such schemes are out of harmony with his own notions, so we'll consider the sketches and leave the matter to him."

"A little knowledge, etc., etc., my dear."

B.J.W.



THE FOUR HORSES

ST. MARK'S, VENICE

The four horses over the entrance to St. Mark's, Venice, are among the best ancient examples. They are of gilded bronze, and have travelled to various lands. There are several theories as to where they were first placed but it is known they were taken by Constantine and sent to Constantinople. In 1204 the Doge Dandolo brought them back to Venice. Then Napoleon took a fancy to them and they were sent to Paris in 1797; but in 1815 the Emperor Francis returned them to Venice and St. Mark's where we hope they may remain.

"Now, when I build a house of my own—"

NOW, when I build a house of my own———"

How often have we heard it. . Every man has said it once, and most women a hundred times.

As a matter of fact, there are very few who do not cherish the hope that, sooner or later, they will build the house of their dreams.

The building of that home, be it small or large, is one of the "Great Adventures," and most people have "made a Little List" of things which they would not miss for worlds. Some ask Santa Claus for a shelf over the kitchen sink, while others hang up their pillow-slip for a pantry facing East.

Unfortunately for most of us life is a matter of weighing relative advantages and disadvantages, and in nothing is that more in evidence than when we set out to build a home.

In the first place we have to cut our coat according to our cloth, and our financial resources are seldom inexhaustible; moreover, even if the cost does not enter into the question at all, we have still to constantly weigh the advantages and disadvantages of almost every item in the planning and design of the house, and to decide whether this, that or the other convenience will compensate for such and such inconvenience. Of course there may be many instances where we can have our heart's desire, be it a large bathroom or a left-hand gas-stove, without sacrificing anything essential, but there are many cases in which the whole plan and design have been ruined because the owner had a particular fad such as securing a fine view from the bath-room window "because in the last house we were in, it looked on a blank wall."

However delightful it might be to have every room facing North-East with a fine view, it will possibly happen that the view is South, and since all rooms cannot face North-east and all cannot have the view, we have to decide which most need the sun, which the view (and perhaps which can dispense with both.)

It is certainly an excellent thing to make out our list of all the things we should like, and hope to have, but, having completed it—if such a list can ever be complete—we have to realise that we can seldom have all.

Both aspect and prospect of our little lot (or large estate) will have a material influence on the arrangement of our rooms, and the little plan which we so fondly imagined would be ideal, because we pictured the street as being on the South, may prove to be utterly useless now we have bought our land, and find the street is on the West.

There are many things which it is essential to consider at the outset; for instance, while rough and hilly ground will often lend itself admirably to a well-planned house if carefully thought out, we must not forget that it is generally more expensive to build on, albeit we may have saved in the cost of the land.

There is another item which is not quite so easy to decide—that of the design and colour scheme, both inside and out.

In this respect, we have to keep a constant watch upon ourselves to make sure that we like this or that for the sake of its beauty of form and colour-harmony, and not because it happens to be "the very latest fashion." That point is by no means so easy to settle as one might at first imagine. Even those of us who have not yet reached "the sere-and-yellow-leaf" stage can call to mind many fashions which have strutted their short span, and passed ignominiously away. There were "Queen Anne" fronts (and worse backs), palms in bamboo stands with yellow or blue muslin draped about; there were periods of grey, vieux-rose and black (only dying), and through it all the constantly recurring phrase "It is all a matter of taste, and I know what I like."

Unfortunately few know what they really do like for long, and most are too often caught by a passing craze, which, once passed, leaves nothing behind but a very obvious stamp as having belonged to such-and-such-a-year, and of being hopelessly out-of-date.

A dress or suit can be discarded at the end of the season, but a house is there for many years.

If we are wise we shall always ask ourselves whether we shall grow tired of this or that when everyone has it, or when it has gone out of fashion; and out of this we shall generally find in our home, as in everything else, that the things we never tire of are those which appeal through their simple, truthful lines, and by their restful colour harmonies, and not by fussy gables and "cut" brackets, and that true beauty is not for a day but for all time.

And so let us remember "when we build a house of our own."

R.K.H.

THE REVOLT OF "SOME OF THE ARCHITECTS"

THERE were days and nights of unrest among the people, meetings were held in Martin Place during the lunch hour and in the Domain on Sunday afternoons. Gradually these meetings drew larger and drew more enthusiastic audiences, while the passing of every hour saw the names and addresses of many converts written in the Great Roll Book of the Revolution. Yes! for "Some of the Architects" were in revolt against stone colour paint, blue-black bricks, and architectural confusion. Race meetings and jazz halls were almost deserted. The press, with one exception, devoted valuable pages to news of the cause. The police became enthusiastic supporters, for, as they put it in a letter to the Chief Executive Officer of the Revolutionaries, "Crime cannot flourish against a light background, so we will join your movement and help you." Golfers at first were openly antagonistic, for they argued that blue-black brick club houses were absolutely necessary as a back-ground against the flight of a white ball, but when it was pointed out to them that a vermilion ball would be more conspicuous in its flight against a white club house, than a white ball against a blue-black one, they saw how wrong they had been and becoming very zealous, even enlisted the caddies in the great fight against dreariness.

It seemed to the casual observer that success was to crown the efforts of the Revolutionaries, for there was apparently little or no serious opposition to their activities, but on looking closer into the heart of the city, and especially into the winter gardens of fashionable hotels, there were to be found groups of excited, well-fed and well-dressed men and women, clearly disturbed, and from their talk it was gathered that they were counter-plotting against the Revolt of "Some of the Architects." They were THE Architects, and the Speculative Builders, and the wives of the clients of Some of the Architects, and justly so were they annoyed, and perturbed, and indignant, for had not the Revolutionaries already succeeded in persuading the Customs Authorities to bar the importation into the country of "Natty Bungalow Designs for Builders, Clients' Wives, and Architects," thus depriving all these good folk of their main source of inspiration, for they felt that all their good work would lose its attractiveness, its appeal and its up-to-dateness.

Now a very clever move was undertaken by the Revolutionaries to counteract this strong opposition to their movement, and a very simple one. They anonymously published a smartly-designed weekly devoted to the designs dear to the hearts of the opposition. "Blue-black bricks, stone colour paint, and architectural nicknacks, were much in vogue," the paper said, and the Speculative Builders, and the Wives of the Clients of Some of the Architects and THE Architects said "Fine!" "didn't we say we were fashionable and in the swim," and the weekly became very popular among them. A few weeks after its publication photographs and drawings of lighter coloured houses began to appear on it pages getting lighter in their tones, till one week a real cream house appeared. Why! even the eaves, gutters and downpipes were cream. At first these good people were dumbfounded but, when they read the letterpress saying that "cream and even pink, and blue, and green were to be the coming fashion in colour for houses," and "That the lines of the roofs and eaves were to be simpler and more graceful," and "that stone colour paint was absolutely not being used at all," these charming people immediately began to build and think and design in pale aesthetic creams, and pinks and mauves, and simple, direct lines. They also were seen at the meetings of the revolutionaries drinking in words that were soft music to their ears. Slowly and slowly the opposition melted as surely as a pile of sugar melts when water is poured upon it.

The time was nearly ready when propaganda must cease and active operations were to commence, for the leaders of the Revolution had decreed that whitewash and yellow-wash, and cream-wash and pink-wash and blue-wash and green-wash must replace the blue brick and stone colour of existing structures, and gables must have their fussiness removed.

Strong working committees were arranged in every suburb to organise all the voluntary labour possible, huge temporary storehousese for fresh stone lime, and colours were erected. Large dumps of carpenters' tools were collected, gangs of six men and a leader were formed, each gang given certain buildings in a street, and told to finalise their own particular organisation within a given date. Gradually the huge machine became perfect and a night in January, nineteen hundred and twenty-six was chosen for the great assault on the city and suburbs. This date was kept a carefully guarded secret from all but those who were enrolled on the pages of the great Book.

It was felt by the leaders of the conspiracy that the task was such a superhuman one that the aid of a God or Goddess should be invoked. After many days and nights of talk the Goddess of Beauty was chosen and prayers were to be offered to Her to ask Her to give the workman each the strength and the power of one hundred mortals, and also to cast a deep sleep over the occupants of the buildings to be transformed. For this purpose an altar of Lapis-Lazuli was erected on the heights above Dobroyd Point, and the Priests of the Revolution prayed by day, and by night liberating each morning thousands and thousands of caged birds so that their songs of joy should aid the prayers offered to the Goddess of Beauty.

At last came the "Night of Great Deeds." A warm dry night with a gentle breeze blowing from the interior. "The Goddess has heard our prayers and she has given us this warm, dry wind to enable our colour-wash to dry more quickly and so help us in our labours; it is a good omen," the Leader of the Revolution was heard to say as he stood, watch in hand, at eleven thirty in the office of the Central Executive, waiting to give the signal that would set the machinery of his organisation to work.

. . . .

On rising in the morning the people were amazed. They opened their eyes to a new world, where everything was fresh, clean, cheerful, and restful, for so successful had been the work of the priests with their prayers and the liberating of caged birds, that the Goddess of Beauty had persuaded the God of Construction and Public Works—he would do almost anything for her—to concrete all roads and to cause huge dams to be constructed overnight in the mountain ranges to the south west of the city with service pipe lines to storage reservoirs, for said the Goddess of Beauty "If these mortals have at last seen the error of their ways and are to have beauty of form and colour; they must be without dust and have an abundance of water," and on going forth into the streets, the people saw fountains in odd corners, in little squares and wherever fountains delight in being, and clean fresh water running in all the gutters.

Gay white ferry boats floated on the blue waters of the harbour, clean electric trains painted yellow outside and cream in, drew into stations that were denuded of shrieking, badly-placed advertisements, and at the Central Railway Station the book stalls were in positions that had been designed for them. In the city itself perhaps the greatest change of all had taken place. The awnings were gone, and graceful high arcaded lower storeys formed an entrance to the show windows of the stores; the people who were attracted to the goods displayed passed along a gaily painted and high vaulted promenade, free from the hurry, bustle of the outer pavements.

At midday a large meeting was formed in Martin Place, the leader of the Revolution and his chief executive officers were rewarded by the smiles and cheers of the people, who, carrying them shoulder high through George Street to the Town Hall, overthrew the established Council of Party Politicians and putting them in the vacant seats said "You must administer the affairs of our city for us.

I awoke with a start and looking out of my office window saw the City of Unfulfilled Possibilities.

Drummond MacPherson.

CANBERRA COMPETITION RESULTS

The premiated designs, for Permanent Departmental Offices, Canberra, which gained first three places in the recent competition are announced as follows:—

First design, No. 76.—G. Sydney Jones, of Sydney; premium £500.

Second design, No. 53.—Messrs. K. A. Henderson and P. W. Williams, Melbourne; premium £500.

Third design, No. 79.—Messrs. Harry S. Budden and Francis G. Hood, Sydney, premium £300.

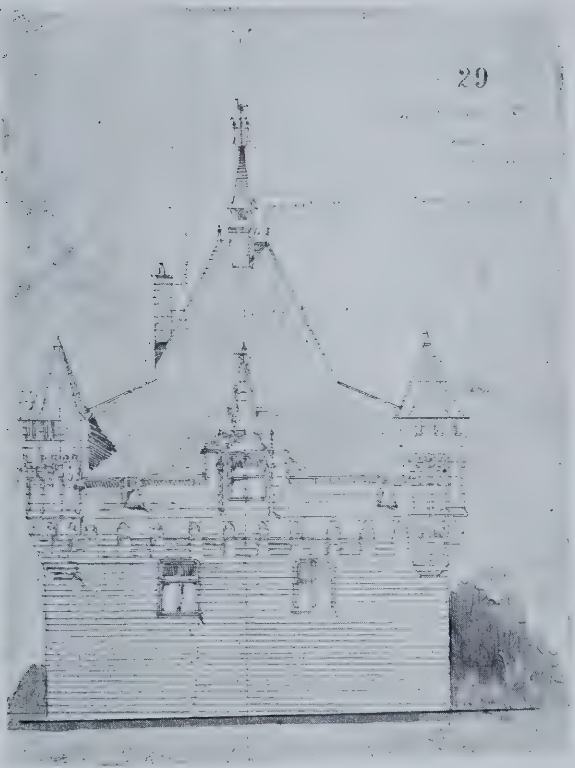
Six other prizes of £100 each were also awarded. Fuller particulars will appear in the next issue of Architecture.

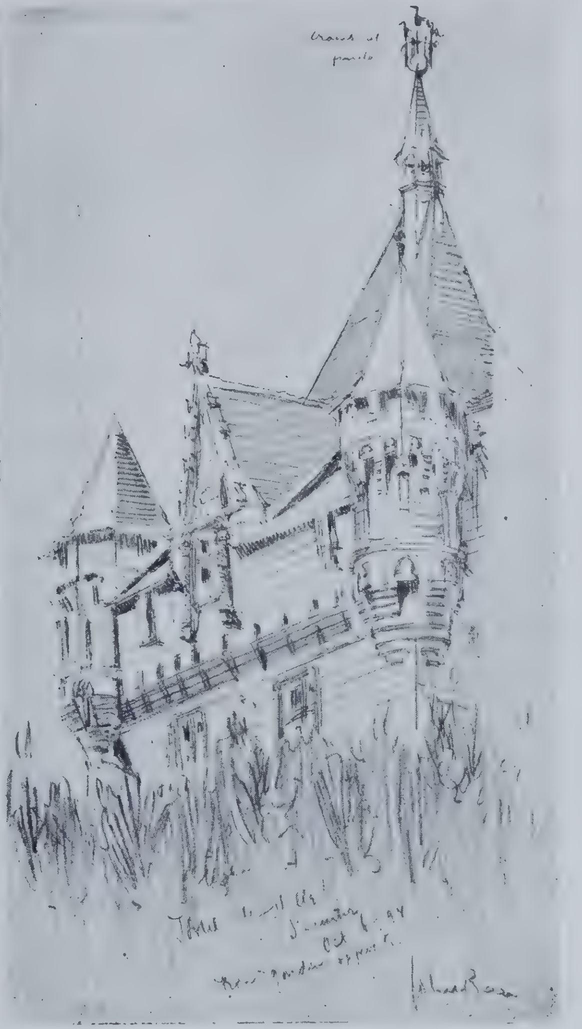
NOTICE.

REGISTRATION BOARD.

The recent ballot for the appointment of two members to the Registration Board nominated by the Institute and Architect's Association resulted in the election of

B. J. WATERHOUSE, and
O. W. WESTON.





SAUMUR

THE digging up of these sketches from my heap of architectural lumber, takes the memory back to some of the incidents of that tour and the interesting people met. Like many others, I had never heard of Saumur, a town at that time of some 15,000 inhabitants, and went there on the advice of that delightful, scholarly old gentleman, the late Mr. Phene Spiers. His knowledge of France, its architecture and literature was marvellous. From memory he could map out an itinerary of a tour; he would start off by drawing a map showing the towns and route, a list of what to see and also avoid, selecting the best towns, buildings in those towns, and the best books of illustrations of those buildings. He could also give a list of trains, cost, where to stay, and how long. Some of my happiest memories are in looking back at the kindness and personal interest taken by men like Mr. Phene Spiers—their keenness in working out the schemes with you, and boyish interest in going through your collection of sketches and other work, and then showing their own work in return. With all necessary information from my instructor, off to France and finally down the Loire, Saumur being on the left bank and on an island. After crossing over the bridge and island there is a small square opening into two streets which run through the town. There are two interesting buildings here, a theatre and the Hotel de Ville, the latter mainly 16th century work. The front elevation and a sketch of this are illustrated. There are other interesting buildings and art works in the town, but "that is another story."

John Barr.

THE OLD COMMISSARIAT STORES

WITH the demolition of the old Commissariat Stores at Circular Quay, Sydney will lose one of its most interesting landmarks, and one which, for considerably over a century has kept watch and ward over this portion of our city, reminding us as we have so often looked upon it of what Sydney was like in the latter days of the eighteenth century. In all the old plans of Sydney this antique building is clearly shown, seeming by its unusual bulk to dominate its surroundings, and looking even more substantial than it really is by reason of the contrast it presents with the smaller and less pretentious buildings around it. Formerly it stood close to the water's edge, so that goods and stores were landed direct from the vessel into the building itself; but in later years, by reason of the extensive reclamation works and the building of wharves, it is now some considerable distance from the element which formerly lapped its foundation stones.

Many will regret the necessity for its destruction, and when it has disappeared and another link with the past is severed, there will be a sense of something wanting in this portion of the city—something that has seemed to be part and parcel of the very ground itself. One has only to look back upon the years that have flown since this fine building, still in an excellent state of preservation, reared its bulk alongside the shore of what was then a picturesque inlet, with portions of the virgin forest still in evidence. The conception of such an unusually large building for these early times was a bold one, and it is quite possible that there were, as in our time, many who questioned the wisdom of such an expenditure of money and energy. But time has proved the value of it, and much as its accommodation was needed in the early days, its usefulness has extended right up to our own times. A close inspection of the building will reveal many curious marks and initials on the stones, executed in some enduring material, which has lasted to the present day. These are the work of the convicts who erected the building—whether out of a form of vanity, amusement, or by reason of official orders, it is difficult to determine. However this may be, there are the marks, and if it were possible to identify these, what an interesting record the old stones would furnish.

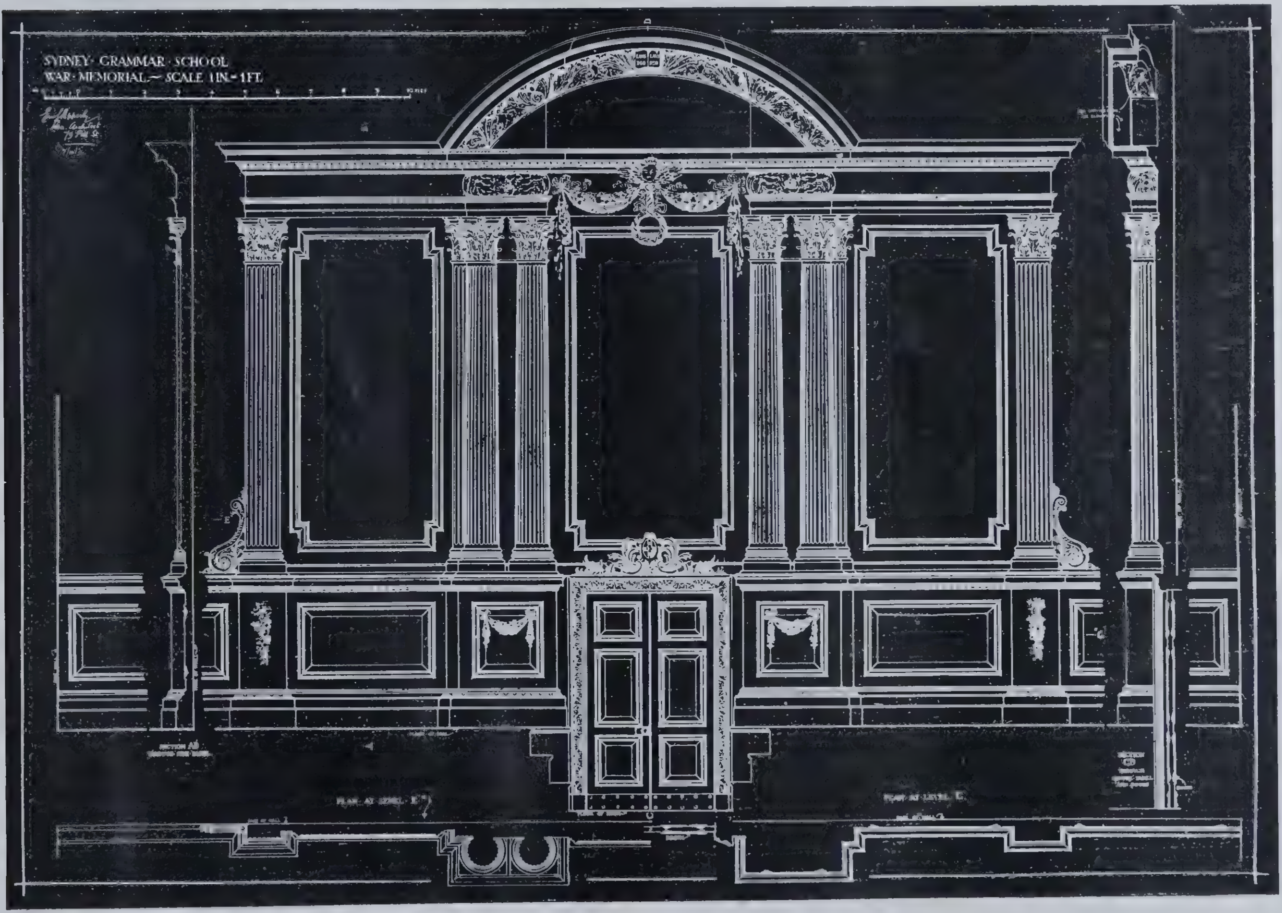
Turning to the official records of the times when the building was first erected, we glean the following information. The first mention of it is found in Vol. VII. of the Historical Records, where, on page 41, Lieutenant Foveaux, in writing a despatch to Viscount Castlereagh, under date February 20, 1809, speaks of the building in the following terms: ". . . . "I had made arrangements for commencing the erection of an extensive range of stone storehouses, contiguous to the wharf of Sydney, on the annexed plan, the adoption of which I have strongly recommended to my successor, for the reasons assigned in my letter to your Lordship of September 4 last." Foveaux held the position of Acting, or Lieutenant, Governor for the five months succeeding the deposition of Bligh, until he was superseded in office by his superior, Colonel Paterson. In a letter to Governor Macquarie, on his assuming the Government, early in the year 1810, Foveaux again mentions the stores at Sydney in the following words. The letter is dated February 27, 1810: ". . . . . I suggested the plan, prepared the materials, and made great progress in the elevation of the new store close to the waterside at Sydney, by the completion of which incalculable expense (*sic*) will be saved in the security and preservation of the Government stores and provisions. . . ."

The building was completed by Macquarie, and soon after the foundation stone was laid of the substantial building behind the stores, and facing George-street. The familiar inscription on this latter building is still clear and distinct, and reads as follows: "Erected in the year 1812, L. Macquarie, Esq., Governor," surmounted by the initials "G.R." Recent improvements along the street have considerably improved and smartened up the old building, but formerly a row of decrepit cypress trees grew in front, enclosed by an area railing. Here the Commissariat and his staff dwelt in the olden days, and the covered-in verandah at the end of the building, facing the Fire Station, originally formed a beat for the sentry on guard. This was necessary, as the valuable commodities stored in this, and the big stores nearer to the water, were a never-ending source of temptation to one particular class of the community in those days. One has only to glance through the official record of the time to understand the stern justice meted out to the offender caught robbing the stores, and his punishment was of that nature which would prevent him having an opportunity of repeating his offence.

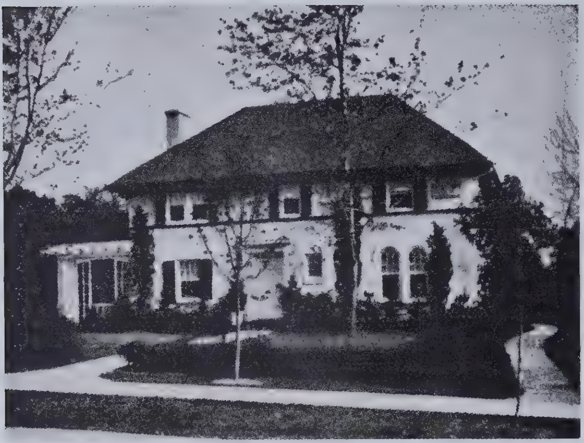
Times have changed, and though a large portion of the old structure is still the repository for goods, delivery is made by land, and never more will the tide waters lap the moss-covered stones. The march of progress has swept away in its career every other ancient landmark associated with the waters of Sydney Cove. New and imposing buildings line the water front, where formerly the quaint structures of a bygone age marked the indication of our city's infant steps. One by one they have crumbled away under the hands of the builder, and have been replaced by something more pretentious and in keeping with the steadily-increasing demands of commerce. Up to the present time the old Commissariat Stores have been isolated amongst the creations of a more modern age, yet still possessing a dignity and substantial air which speak well for the workmanship of olden times. But the fiat has gone forth, and a most interesting and historic portion of early Sydney must give way to the exigencies of railway accommodation.

The Australian Historical Society intends making an effort to secure the inscribed tablet before mentioned, so that it may be preserved as a relic, not only of an interesting and historic building, but as a reminder of that doughty warrior, Governor Macquarie, whose predilection for seeing his name in print was so evident, but which little failing on his part in no way detracts from the energy and enterprise he showed in his building programme, and in his evident desire to make Sydney somewhat more worthy of the proud position it was destined in later years to hold.

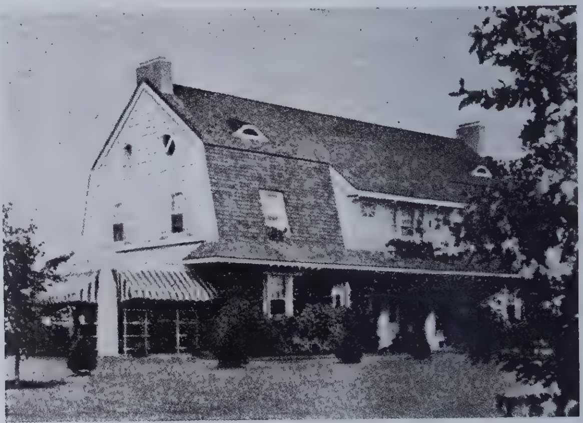
Frank Walker.


SYDNEY · GRAMMAR · SCHOOL
WAR · MEMORIAL — SCALE 1 IN. = 1 FT.

SYDNEY GRAMMAR SCHOOL WAR MEMORIAL.
ERIC APPERLEY, ESQ., HON. ARCHITECT.



HOUSE SHOWING ITALIAN INFLUENCE.



HOUSE SHOWING DUTCH COLONIAL INFLUENCE.

SOME ESSENTIALS OF HOUSE DESIGNS

THE essentials which contribute to the successful evolution of the home, comprise a proper admixture of the utilitarian and the aesthetic, and a full realisation and acceptance of the controlling elements of the site and location. All these matters receive due consideration by the architect, who is sincerely trying to produce the best possible result. There is a danger even in writing (and perhaps talking) too much about these matters. One recalls the apt remark of the old Puritan who listened with all due deference to the systematic person who said he worked six hours, played six hours, slept six hours, and read six hours. "Oh! and when dost thou think?" was the rejoinder.

John Taylor Boyd says, "We are apt to view architecture too technically, but we have need of a clear ideal standard to aid in measuring our work. Unless there is some good standard, writing about house design will degenerate into disputes concerning the relative value of details or the merits of current formulae. Even among the best houses one may note that motives are often repeated mechanically, and that a tendency exists towards formula and recipe."

Up to the present time our efforts have produced (with a few exceptions) only a chaotic mass of merely indifferent building, and this is particularly noticeable in small house design. It is necessary to get back to a simpler and more unified and coherent method. This can only be accomplished by reducing to the L.C.M. essential units, such as a simple convenient plan; efficient windows, doors, eaves, with a dignified gabled or preferably hipped roof. More of the artist's broad point of view in considering the mass of the structure is required. They are not confused by difficulties of technique or redundant detail, and this point of view would produce a greater breadth conducive to a repose and restfulness of both single unit and group.

In regard to external appearance; the main elements are simple and it is remarkable that we get so far astray—and so often. For instance, given a simple plan outline, a gabled or hipped roof, carefully proportioned eaves, projections, cased frames with shutters; a carefully designed main entrance just sufficiently emphasised with pleasing detail, a simplification of the wall and roof materials and the result should be successful. If these methods are extended to whole groups by the collaboration of architects working in sympathy, a broad unity would result, with advantage to the whole neighbourhood. We have all experimented with various types of windows, casements and cased frames of all types, and it would be surprising if the unanimous conclusion is other than in favour of the box frame. The origin of the box frame seems lost in obscurity, but thanks are due to the originator. The boxed frame permits of efficient regulated ventilation, the easy fixing of shutters for the exclusion of the sun's hot rays, the attachment of fly screens, and a weather tightness quite perfect, and if set on the outside of the wall permits of a most satisfactory treatment for hangings, etc., internally.

It is sufficiently elastic from the external point of view to give a satisfactory effect with either the vertical or horizontal lines predominating, if the architect knows just how wide or how high it should be to produce the proportion suitable to the surrounding masses. To get the windows and wall space just right provides sufficient mental exercise, and the time is thus better spent than endeavouring to design some original verandah bracket, or other detail. In a word the boxed frame eminently suits our climatic conditions.

Another very important detail is the eaves, and although our climate calls for a protection from the sun, it is surprising how great a shadow a small projection secures. The over emphasis of this feature is apt to produce too great a shadow and spoil the general proportions. Eaves, in most cases, appear more satisfactory when ceiled horizontally.

The cast shadow on rough-cast or brick broken by the light on glass and shutter is most beautiful, and the unifying value of the shadow is very great.

HOUSE SHOWING AMERICAN COLONIAL INFLUENCE.

AN ENGLISH HOUSE.

Balconies and verandahs produce pitfalls for the unwary designer, and many of our most satisfactory specimens of domestic architecture leave something to be desired in this respect. They should either be absorbed within the structural bounding lines of the mass, or be, if outside these, large enough to avoid that meagre and disjointed appearance so detrimental to the design, and should provide sufficient space for living or sleeping-out accommodation now so customary. The doors leading to balconies or verandahs should be wide enough to avoid in the case of verandahs the feeling of detachment which a narrow door gives, and in the case of bed-rooms, ample ventilation during the summer months, equivalent almost to sleeping out. They should always open out or slide to avoid difficulties with hangings. The sliding type has some advantages, as venetian shutters may then be readily attached. Thus we have our simple roof lines, hipped or gabled, overhanging eaves, cased frames with shutters, wide doorways to verandahs and balconies, outer walls either rough casted, cemented, or plain brick (not mixing of these please, although it is occasionally done successfully—but it should be avoided generally), our tiled roof with, if possible, special hip and valley tiles. An alternative is mitred intersections and soakers, in the case of shingle tiles, with secret gutters in the case of tiles of other patterns, because nothing so ruins a roof as a strip of galvanised iron up the valley. It is artistically and economically bad.

Now with these ingredients, (and what more is required?) mixed with the matrix of trained intelligence, and used consistently by a whole group of architects, we should be rapidly on the way to improvement, and if the critic whispers "monotony" it would be preferable to the inharmonious architectural jazz that prevails at present.

The possibilities of the elements enumerated are endless, and one has only to study the best work of eminent English and American architects, and particularly Mr. Herbert Baker in South Africa, to realise that the success attained is the result of the right rise of a few important factors.

We require whole groups of architects imbued with some such standard of accepted principles.

A few more words in regard to the plan. As has been well said, "The plan is the big thing in architecture, it really embodies art more than do either elevations or decoration. The elevations are the looking glasses through which the art of the plan is seen; they are the geometry created before the eye by raising the planes on the lines of the plans.

The plan must reflect the family ideals, it must meet the standards of utility, comfort, convenience of arrangement, and the best procurable equipment for the economy of labour and sanitation."

There is an ever-growing demand in even the moderate-sized house for suite arrangement of bedrooms, combining bed-room, dressing-room, bath-room, and own balcony, separate bath-room for children; separate sleeping out balcony for boys and girls; and separate bath-room, etc., for maids. The very best equipment for bath-room, kitchen, and laundry is demanded, and requires the detailed study of the architect to produce a satisfactory result, and to avoid the appearance of a miniature engine-room.

The understanding and appreciation of a better type of small house is the result, no doubt, partly of the pioneer work a few architects have carried out during the last ten or fifteen years. Clients will now pay for this increased convenience and efficiency, just as they will pay £50 for a Gruner or Lindsay, whereas a few years ago £10 or £15 was a big price to pay for a picture by an Australian artist.

All these essentials require consistent application and study, and have an appreciable influence upon the development of the plan of the house. Where the area of the lot is not restricted it should be possible to plan on more open lines than we do at present, with advantage to the aeration and perflation of the house in the summer time—especially in the hotter parts of the State.

A reversion to the L, U, or H shaped plan of some of our earlier country houses, would avoid some of the stuffiness and absence of light and air the more compressed type involves. The tendency, of course, at present is to live in smaller houses, as they are cheaper to build, furnish and maintain, so in many instances a modification of the types mentioned would be necessary.

Detailed and intense study is requisite to devise a good subdivision of ground or first floor into the various rooms in order to get the maximum value of space, access, comfort, exposure, cross ventilation, cupboards, and the proper space for the placing of furniture, etc.

There is in any case, no recipe for it, and only constant study and practice will enable it to be done well, but quite the same amount of deliberate attention must be given as is usually spent upon the elevational appearance.

If we honestly try to express perfectly the life of our people, we shall ultimately develop a domestic architecture characteristic of ourselves and our country. This will take time, and the devoted energies of all who pursue the study of architecture. Our students have now the opportunity of acquiring a sound knowledge of what architecture really is. They are also keenly enthusiastic, and many will soon radiate an influence tending to the improvement of all our architectural activities; they will, we hope, be so grounded in what is suitable and essential, that the present aimless groping in the realm of the Californian Bungalow and kindred anomalies will cease, and Australian domestic architecture come into its own. They will know what is good and suitable and frankly express themselves in the terms which training, study, and observation have crystallised into conviction, and reveal as suitable to our particular climatic conditions. They will, let us hope, work in perfect unity as brother architects for the benefit of the whole community and the beautification of our country, irrespective of individual honour or glory. "None for the party and all for the State." Individual success will pass without leaving any tangible impression, and it will only be by collective success that we may hope to improve existing conditions to any great extent. Professor Lethaby has well said: "The modern way of building must be flexible and vigorous, even smart and hard. We must give up designing the broken-down picturesque, which is part of the ideal of make-believe. Beauty is the complexion of health, to reach it we must put aside our pre-occupation about different kinds of rouge." It is devoutly to be wished that conditions which permit so much indifferent building, both as to its technical unsoundness, and artistic demerits will soon change, and the great mass of domestic buildings over which municipal bodies now exercise no control in regard to the suitability to location and sound design—largely the result of the speculative builder and incompetent practitioner. It is as necessary to exercise jurisdiction over such work as over the sanitary soundness of the plumbing and drainage.

In this connection Mr. T. F. Hamlim pertinently remarks: "As long as speculative builders and real estate operators are content to build cheap and ill-designed buildings because there is great profit in this evil trade, just so long, no matter how hard the architect thinks about new ideals, and no matter how perfect are the solutions he devises for the new problems, will the social idea be thwarted in architecture, and, our suburbs remain chaotic, unbeautiful, depressing monuments of an inexcusable avarice.

The blame must rest not upon the architect, but upon that small minority who are determined to build as cheaply and as thoughtlessly as the law allows.

Fortunately, however, there is the gradually, yet ever-growing number of carefully designed houses, which slowly, yet irresistibly, raise the standard of taste.

We are all animated by a desire to uplift our profession and benefit our country. The dual idealism which the architect should always possess, which makes him alert to practical requirements, and at the same time always striving for beauty, prevents him from being satisfied with merely crudely necessary results, however perfectly convenient.

The true architect, like every true artist, sees life in a manner too broad and too keen to allow that. He sees life is a matter of ideals as well as of bread and butter; he is always alert to the large place which beauty must have in making life rich and full. He realises concretely that a passionate need for beauty is innate in the very tissue of every life, and that it is a real need, coextensive with the need for health and life itself, and as definitely requiring satisfaction, to produce a sane and happy Commonwealth.

B.J.W.

"As regards the world's very ancient ruins, shall we ever discover some exact mechanical process for determining their age?

Will it one day be possible by some hitherto unsuspected process or attribute to assign the number of sunrises or earth revolutions and sun-cycles that have passed since a given wall was erected, or a given stone taken from its quarry bed?

May not alternate light and darkness have left some calculable impression on "scarped cliff and quarried stone"?

One poignant reflection there is: that man could build such beautiful dreams in sculptured stone as in all ages he has, and yet to be so barbarous to his kind. Temples have generally been synonymous with cruelties and sacrifice.

Furthermore, masonry, whether as an Art, whether as an Order, presents itself to us mainly as a great Pretension, which embodies little of the milk of human kindness; but which rather separates men into selfish ones.

It is after a lapse of time, when temples and palaces have become monuments, that we revere them—the perpetuation in stone of sentiment and faith."

From "The Secret of the Pacific,"
By C. REGINALD BROCK.

SKETCHING COMPETITIONS.

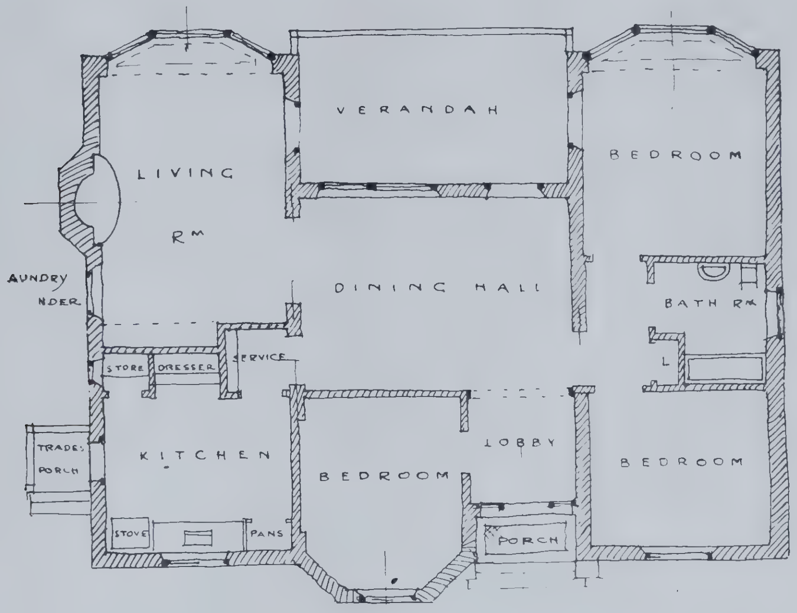
Joseland Medal.—Conditions same as last year.

Manfred Prize.—Conditions for Manfred Prize for best collection of Measured Drawings may be seen at the rooms of the Institute, 5 Elizabeth Street.

CORRECTIONS.

The Board of Architects' Report, which should have been printed in the last issue, appears in this number.

In the last number the report of Proceedings on the front page was dated September 1st, instead of October 7th.



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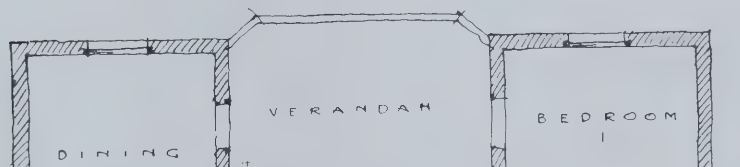

PENCIL DRAWING BY HENRY RUSHBURY, ENGLAND. Reproduced by permission of "The Studio."

A HOLIDAY IN CENTRAL EUROPE

IT was pleasant to be in Paris again. There is a compelling sort of fascination about Paris that is always there, and always eludes one; whenever I am in Paris I always spend my time tramping the streets (their 'bus system still eludes me), trying to isolate that illusory charm, but never finding it.

Still, there was almost a homecoming feeling to be in Paris again—the sun shone, the birds sang, kiddies played in the Luxembourg Gardens, and the complacent anglers on the quays had apparently neither moved nor caught a fish since I last saw them four months ago. I managed to put in a very pleasant week, leisurely doing things I had not the time to do before, going over the Louvre and the Cluny a little more carefully, and when the sun shone, sketching along the quiet, peaceful quays. You need never be alone in Paris; if you wait long enough in the foyer of the Folies Bergeres (and that in itself is no mean feat), you will meet every friend you ever had—like Charing Cross station. I was lucky enough to meet a friend there who threw in his lot with myself and a wild fellow-student who had joined me, whose only fault was that his enthusiasm knew no bounds.

So we decided to journey on to Vienna together. We had a luxurious voyage as far as Munich, due perhaps to our having a first-class apartment to ourselves on second-class tickets—the guard was a friendly soul, and is probably still drinking our healths in swarthy Munchnerbrau.

Vienna is a wondrous city; it runs Paris a very close second. Like Paris, it is a spacious city; the broad tree-lined Ring Strasse, flanked by imposing public buildings, surrounding the old city or Innere Stadt, gives it as monumental an effect as could possibly be desired. It would be useless to catalogue the architectural glories of this old city, washed by the swift Danube, for they confront one at every turn; but I was especially interested by the old Royal stables, with their delightful courtyards; and also by the Rococo courtyard, which is all that is left of the old Rathaus, near which is found the Salvator Kapelle. This latter is noticeable for its utterly charming 17th century door opening on to the Salvator gasse; obviously executed by Italian craftsmen, and is almost reminiscent of the Spanish plateresque in its elaborately carved and delicate detail. It just called aloud to be measured, which we joyfully did. Quite near here is the church of St. Maria am Gestade, a real little gem of Gothic architecture audacious in its verticality and the narrowness of its nave, with the most delightful carved canopies over each entrance that one could possibly imagine. It is extraordinary how little one knows of other cities. I had only vaguely heard of the Schonnebrun Palace (Fischer Von Erlach, architect), and I am sure that it is seldom mentioned among the architectural masterpieces of the 18th century; but it is a masterpiece, purely academic and restrained, and altogether delightful. And that wonderful garden sweeping sheer up past a Neptune fountain to the Gloriette on the skyline, that when seen silhouetted black against a sunset sky is not forgotten in a hurry.

The Palace where once dwelt the unhappy Hapsburgs, of whom the ill-fated Karl and Zita were the last occupants, is now open to the public, and a crowd of vacant ox-eyed tourists follows the impatient and stentorian guide through priceless gilded halls, where kings and queens were once wont to dine and dance.

After a marvellous crowded week in Vienna my friends forsook me and went on down to Italy; but some new-made acquaintances in the hotel said, "Why not come with us to Budapest—it will cost you but 1/6?" And for that sum I had a most enjoyable voyage down the Danube in a steamboat full of quaint costumed peasants, with their worldly goods in gaudy bundles, wild looking soldiers, Jews, merchants, and tourists of a dozen nations; passing the historic fortress and town of what is now Bratislava, in Czecho-Slovakia, but which for centuries was Pressbourg, where the Kings of Hungary were crowned. In speaking to a Hungarian, I mentioned Bratislava, and a hard look came into his eyes. "Speak not to me of Bratislava; to a Hungarian it is always Pressbourg," he said.

Budapest has a magnificent situation astride the Danube. On the right bank is Buda, the old city dominated by the Kirolyi Palota, the royal palace, on a steep hill above it, with, further on, the old citadel on another hill. On the left bank lies Pesth, the modern commercial city, joined to Buda by two of the most hideous iron suspension bridges ever conceived by an engineer, who had seen some Beaux-Arts plates. They were perpetrated by two engineers who arrived here in 1860, and left their mark.

Curiously there are few large ancient buildings of merit; the Palace has a noble silhouette, but the detail is very inchoate and coarse. That which struck me most pleasantly was the simply delightful curly baroque spires to the churches, which rose up here and there, green or gold, which seemed to hint distantly of Russia, and of a land mass that stretched away from one, half across the world. The modern buildings are nearly all "secessionist," and often quite interesting and somewhat bizarre; there is a pleasant use of mosaic for exterior decoration that suggests the Orient; and small wonder, for this dark-skinned, high cheek-boned race is descended from the hordes of Ghengis Khan.

The church of St. Istvan resembles St. Peter's, Rome, to a smaller scale, and, indeed, personally I think it has more sense of scale to it. It rained nearly every day, but owing to this I was introduced to "tea mit rhum," which I found admirable for keeping the damp out. And never shall I forget sitting in queer restaurants, sipping Imperial Tokay, listening to the haunting gypsy melodies played by the Tzigane orchestras, lost in sensuous delight while dishes of unpronounceable names cooled before us.

Back to Munich again—at first sight a city of debauched 19th century neo-grec, of an incredible coarseness of detail, notably the Propylea Thor and the Pinakoteks old and new.

But the student will not have to go far to find the old Rathaus, with its clock-tower and street running under it, looking for all the world like a stage set by Max Reinhardt; while some delightful old markets and courtyards can be found. It would not be fair to pass on without mentioning the simply astonishing collection in the Bavarian National Museum, of church furniture mostly of the Merovingian period; wonderful enamelled and inlaid reliquaries, gorgeous altar pieces and crucifixes, and some of the most beautiful and most minutely-carved ivory, that seems almost to excel the work of the Japanese mediaeval craftsmen.

Alan Devereux.

BOARD OF ARCHITECTS OF NEW SOUTH WALES

We are glad to be able to give our readers information relative to the Board of Architects of New South Wales, which has been forwarded by the Registrar.

ARCHITECTS (AMENDMENT) ACT, 1924.

On 14th August last the Minister for Education, Mr. A. Bruntnell, under whose control the Administration of the Architects Act, No. 8, 1921, is placed, delivered the message from His Excellency the Governor to the Legislative Assembly for the expediency of making provision to meet the requisite expenses in connection with a Bill to amend the Architects Act, 1921, in certain respects, and for purposes connected therewith. This Bill was read a first time in the Legislative Assembly on 12th September. It passed through the Second Reading and Committee without amendment, and the Third Reading on 11th November, and was read a first time in the Legislative Council on 12th November. The Second Reading and Committee stage was taken without amendment on 20th November. The Third Reading is an Order for the Day for 26th November.

The Bill provides for the constitution of an Architects' Fund under the control of the Board, and to be operated on by it. All moneys received by the Board will be paid into this Fund, and all expenses of and incidental to the administration of the Act will be paid out of the Architects' Fund. Any surplus moneys may be expended by the Board for the purposes of the advancement of architecture in such manner as it may determine.

NEW BOARD.

The term of office of the present Board expires on 18th January, 1925, and the new Board will take office for three years from 19th January, 1925, subject to the Act.

The Act provides for the Board to consist of eight members—the Head of the Faculty of Architecture in the University of Sydney, the Lecturer in charge of the Department of Architecture at the Sydney Technical College, the President of the Institute of Architects of New South Wales, the President of the Architects' Association of New South Wales, two members to be appointed by the Governor, and two members, who shall be architects in practice, to be elected. The two members appointed by the Governor for the new Board are Mr. G. H. Godsell and Mr. H. E. Budden.

The Regulations for the election of two architects in practice were Gazetted on 7th November. A copy of these Regulations has been forwarded, with a covering Circular, by the Registrar of the Board (Mr. E. Williams), to every architect on the Register of the Board. Nominations close on Saturday, 22nd November, and the election (which is to be by postal ballot), if held, will take place on 16th December next.

EXAMINATION.

The first prescribed examination of the Board will be held at the Sydney Technical College on Monday, 24th November, and the five succeeding days. This will be followed by an oral examination as soon as practicable thereafter.

The subjects of the examination are:—Design, Construction, Building Materials, Hygiene, General History of Architecture, Practice of Architecture.

The members of the Board are the Examiners, with the addition of Mr. B. J. Waterhouse. The Regulations provide that members of the Board may act as examiners without fee.

Subject to final revision, the Time Table will be:—Monday, Tuesday and Wednesday, 24th, 25th and 26th November, Design; Thursday, 27th November, Construction and Building Materials; Friday, 28th November, General History of Architecture; Saturday, 29th November, Hygiene and Practice of Architecture.

The examination fee is £10 10s., and there are thirteen candidates. Eleven of them are, or have been, attending courses in architecture at the Sydney Technical College, and one has partially taken a course in architecture at the University of Sydney.

TRAVELLING SCHOLARS.

From reports received from the London representatives of the Board, the two Travelling Scholars—William Rae Laurie (Sydney University) and Walter Hayward Morris (Sydney Technical College)—are making satisfactory progress in their architectural studies abroad. Both of these students are at present on the Continent.

ROLL FEES OUTSTANDING.

A final warning has been sent to a number of architects whose annual roll fees have not been paid, of the determination of the Board to remove their names from the Register if the provisions of the Act, with respect to the payment of annual roll fees, are not complied with immediately.

ILLEGAL USE OF THE NAME "ARCHITECT."

A number of architects have been good enough to bring under notice persons whose names are not on the Register and who have been using the name "architect." The Board has taken suitable action in these case, and would be glad if architects would furnish information with regard to any other instances of the illegal use of the name "architect."

DECEASED ARCHITECTS.

The Board has recorded and conveyed its sympathy to the relatives of architects who have passed away since it commenced operations: John H. Bates, Albert Bond, Eric C. Bretnall, George R. Bryce, John F. Hennessy, senr., James E. Justelius, John Kirkpatrick, John W. H. Lake, George McRae, Robert W. Pickering, Wallace L. Porter, Joseph P. Power, Lord L. Ramsay, Charles W. St. Julian, Alexander R. Snedden, Francis P. Tunks, Henry A. Wilshire.

(Signed) EDWIN WILLIAMS.

RN

ARCHITECTURE

AN AUSTRALIAN MAGAZINE OF ARCHITECTURE AND THE ALLIED ARTS

"The Old Treasury," Etching by S. Ure Smith

DECEMBER
1924

VOL. 13. NO. 12

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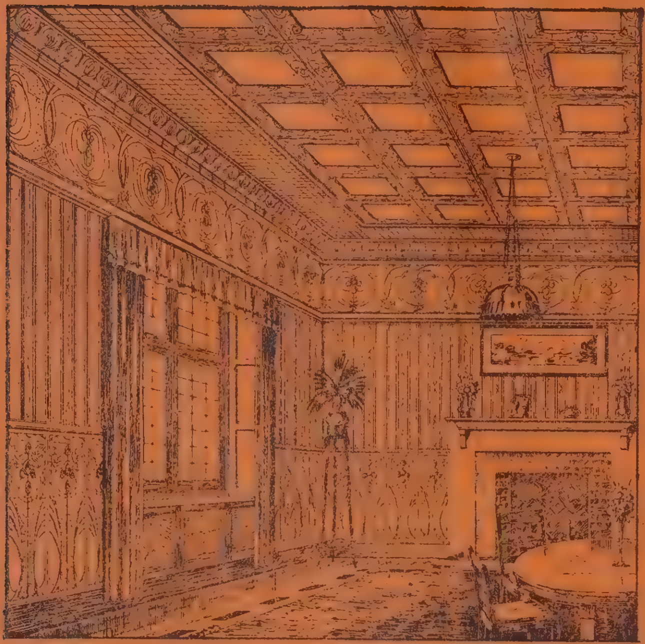

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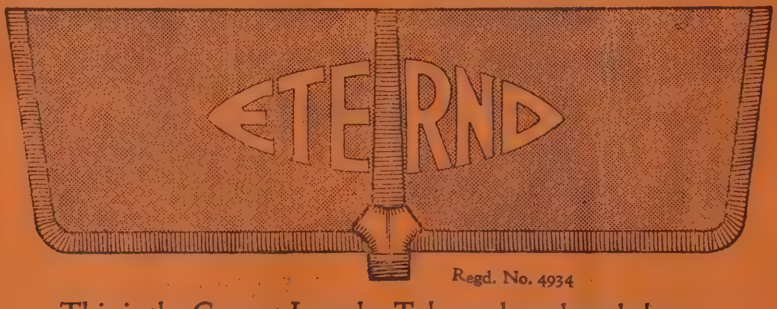

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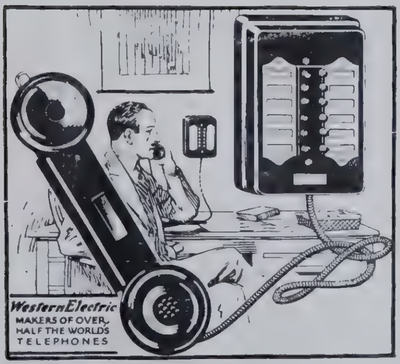
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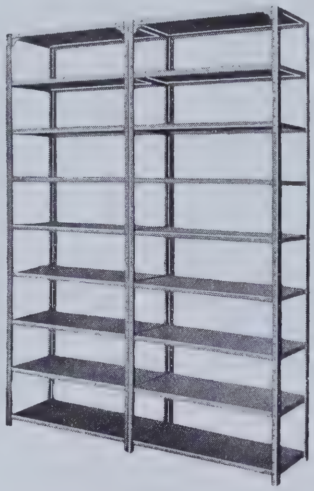

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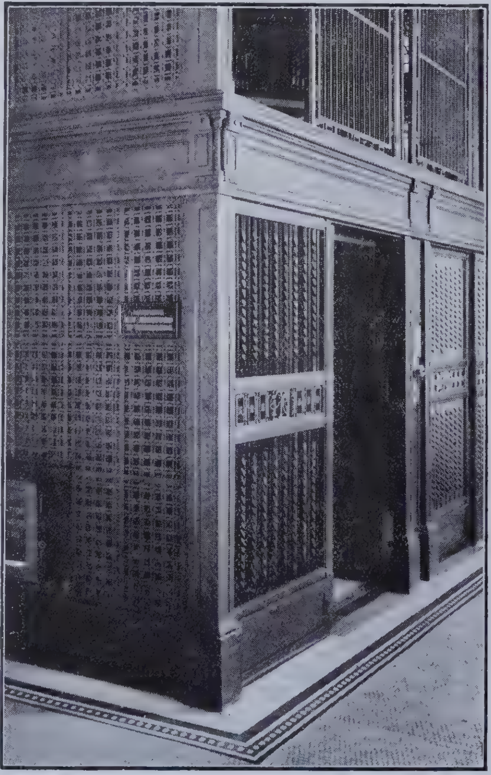

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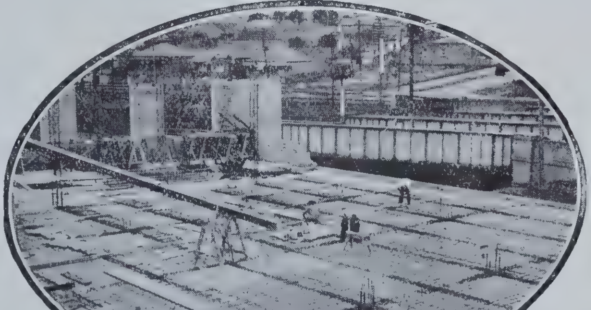

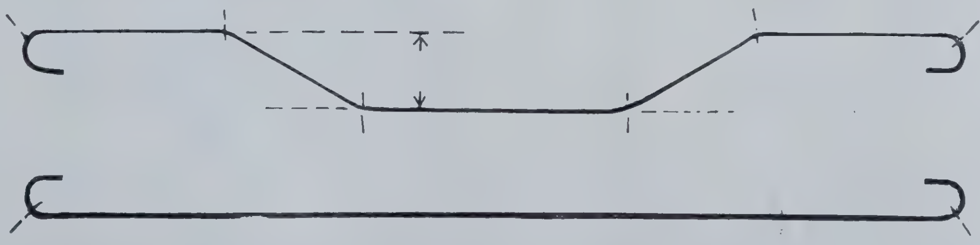

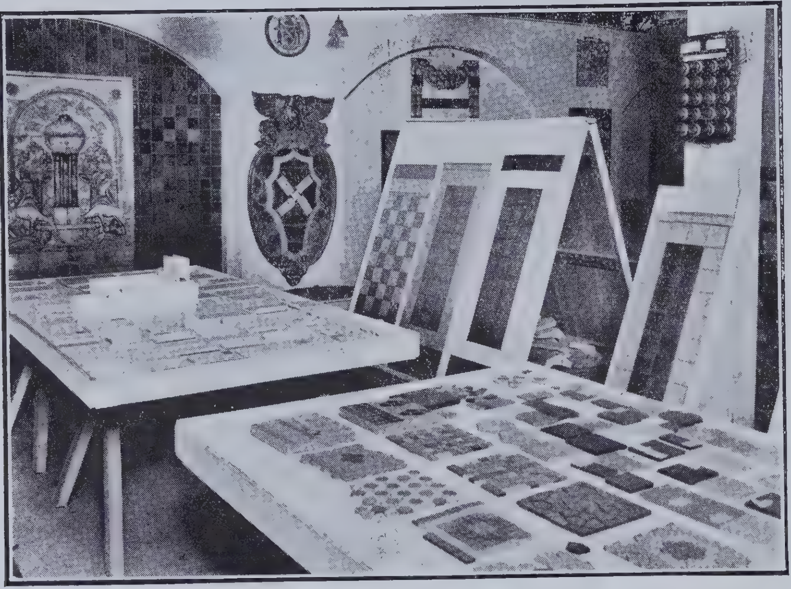

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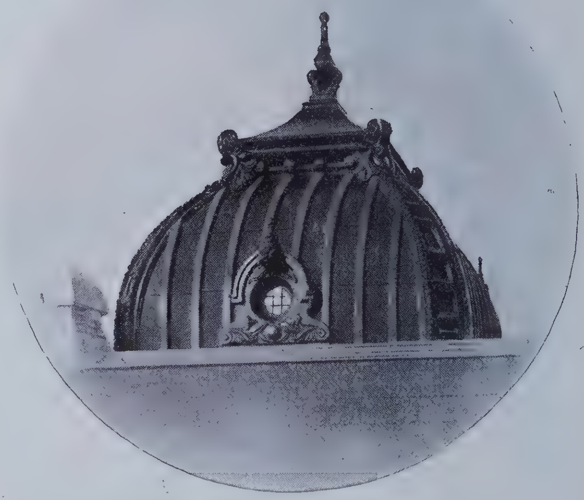

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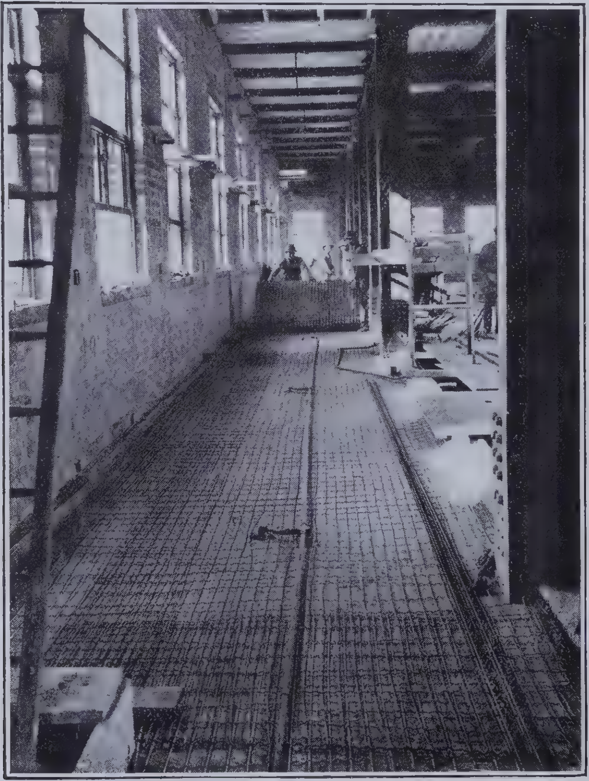

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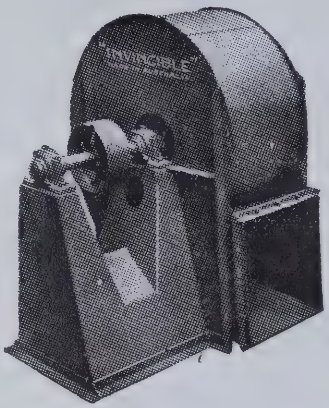

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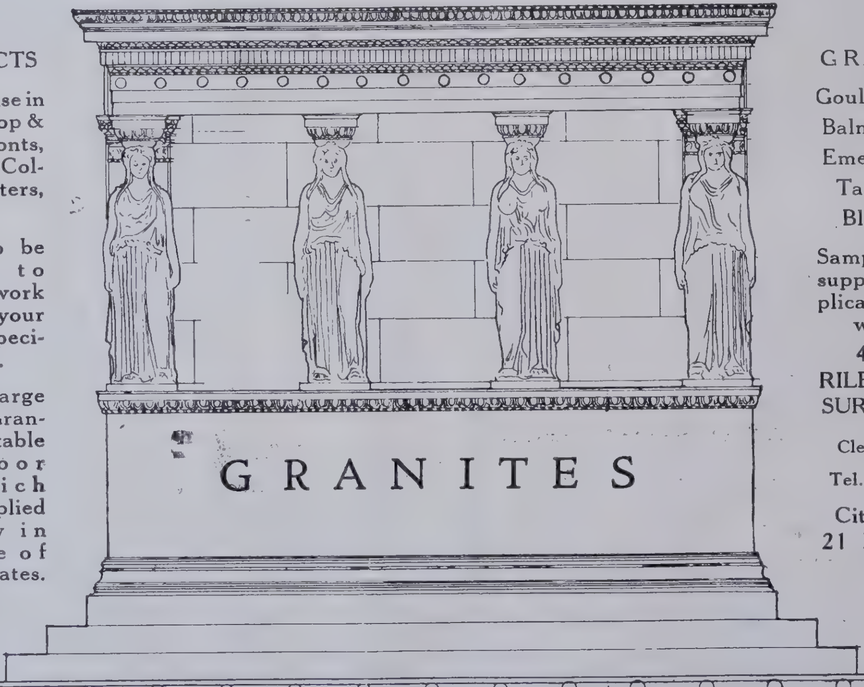

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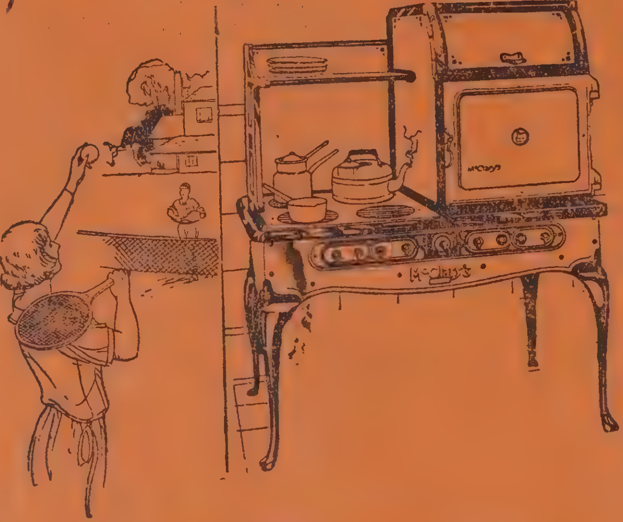

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